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FAMILY ECONOMICS REVIEW

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FAMILY ECONOMICS REVIEW is a quarterly report on research relating to economic aspects of family living. It is prepared primarily for home economics agents and home economics specialists of the Cooperative Extension Service.

Editor: Katherine S. Tippet
Family Economics Research Group
Science and Education Administration
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FAMILY ECONOMICS REVIEW

NATIONWIDE FOOD CONSUMPTION SURVEY RESULTS

The 1977-78 Nationwide Food Consumption Survey (NFCS) provides detailed information on the food consumption of households (at home) and the food intake of individuals (at home and away from home). Some preliminary results from this survey and a comparison of these results with a similar survey taken in 1965-66 are presented in the following three articles, which are slightly condensed from papers presented at the November 1979 Agricultural Outlook Conference.¹ In a fourth article, Mark Hegsted, Administrator of USDA's Human Nutrition Center, discusses the implications of the survey results.

From April 1977 to March 1978, a stratified probability sample of households was surveyed. Information was obtained from approximately 15,000 households in the 48 conterminous States and approximately 34,000 individuals from these households. In addition, 5 supplemental surveys were conducted yielding information for about 5,000 households in which at least 1 member was over 65 years of age, 4,700 households with members participating or eligible to participate in the Food Stamp Program, 3,100 households in Puerto Rico, 1,100 urban households in Alaska, and 1,250 households in Hawaii. All the supplemental surveys will provide data on household food consumption and individual food intake.²

The *individual* and *household* data presented here are based on information collected from the spring quarter in 1977 (April-June). Included are data from approximately 8,600 individuals and 3,500 households.

Individual Data

In 1977-78, food intake information on individuals was obtained for 3 consecutive days. The food intake report consisted of an interviewer-administered 24-hour dietary recall for the previous day and the participant's record of

food consumption for the next 2 days. The record was picked up and reviewed on a return visit by the interviewer. Foods and beverages consumed at home and/or away from home were reported. In 1965-66, food intake information was collected for 1 day only. In the 1965-66 survey, one respondent recalled the previous day's intake for all members of the household, whereas the 1977-78 participants answered for themselves whenever possible.

The data reported in the article by Eleanor Pao are based only on the dietary recall for the previous day. The data for 3 days are still being processed.

Household Data

Information on food used in a surveyed household was obtained through an interview with the person identified as most responsible for food planning and preparation. Trained interviewers used an aided recall schedule to obtain the kind (ground beef, skim milk, etc.), the form (canned, frozen, etc.), the quantity, and the cost, if purchased, of each food or beverage used in the household during 7 days prior to the interview. Households were contacted at least 7 days prior to the interview and asked to keep informal notes, such as shopping lists, menus, and prices of food used, to assist them in recalling the food used during the 7-day period.

In addition to information on food used, respondents reported the number of meals eaten from home food supplies during the week by household members and others. They also provided information needed to classify households by income, size, and other family characteristics.

The methodology used to obtain household food consumption data in the 1977-78 NFCS was the same as that used in the 1965-66 survey with a few exceptions. In 1965-66, households were interviewed at the time of the first contact. In 1977-78, the type of information needed was described to each household in a contact made at least 7 days prior to the interview. The impact of this change will be measured using data from a bridging sample of 1,300 households interviewed without prior contact during the spring of 1977. Preliminary

¹ Copies of the complete papers are available from the Consumer and Food Economics Institute, U.S. Department of Agriculture, Federal Building, Room 325A, Hyattsville, Md. 20782.

² A detailed description of the purpose of the surveys, the methodology, and appropriate uses of the data appears in the fall 1978 issue of *Family Economics Review*.

analysis of data from the bridging sample and data obtained during the spring quarter by the new procedure indicate that the latter procedure did not affect data concerning the aggregate nutrient levels of food used by households.

Results are based on housekeeping households, which are defined as those in which at least 1 person had 10 or more meals from the household food supply during the 7 days preceding the interview.³

³The 1977-78 survey also included data on nonhousekeeping households that have not been analyzed yet.

In comparing the information obtained on household food use in the spring of 1965 and 1977, changes in the age distribution of the population during the last decade should be noted. U.S. Bureau of the Census statistics indicate that the percentage of the population under 18 years of age declined about 6 points, whereas the percentage of those between 18 and 44 years of age increased over 4 points. The percentage of those over 64 years of age increased about 1 point. The number of households with one or two members increased, whereas the number of households with five or more members declined. Further analysis will be necessary to assess the impact of these changes.

HOUSEHOLD FOOD CONSUMPTION, 1977 AND 1965

By Mary Y. Hama¹

IN SUMMARY

Several trends and patterns emerge from the data.

1. The proportion of total money for food that was spent on food away from home increased from 17 percent in 1965 to 24 percent in 1977. As in 1965, households in 1977 with relatively high incomes used more of their money for food away from home than did households with low incomes.

2. Average money value of food used at home per person in 1977 was 20 percent higher for the highest income group than for the lowest income group. Compared with 1965, in 1977 substantially less of the food dollar accounted for certain food groups—eggs, dry legumes, nuts; fats and oil; sugar, sirup, jelly, candy—and substantially more for soft drinks, punches, and prepared desserts.

3. Average quantities of foods used per person also changed since 1965. In addition to those food groups that changed in food dollar, alcoholic beverages underwent a marked increase in quantity consumed. This may reflect the greater use of beer and wine, for which a larger volume intake has been typical, and people's increased candidness in revealing their alcoholic consumption.

IN DETAIL

Expenses of Food Away From Home

Of the money value of all food, the proportion due to food consumed away from the home, including meals and snacks, increased from 17 to 24 percent between 1965 and 1977. Since 1965, the socioeconomic and demographic composition of the U.S. population as well as lifestyles has changed. Factors such as more working females, higher household income, and easier access to inexpensive fast-food restaurants appear to have contributed to the increased percentage of the food dollar spent on food away from home.

¹Economist, Consumer and Food Economics Institute, Human Nutrition Center, Science and Education Administration.

The share for food away from home in 1977 is slightly lower than the share reported from the 1972-73 Consumer Expenditure Survey conducted by the U.S. Bureau of Labor Statistics and from certain other estimates of expenditures for food away from home. The lower share may be explained by the difference in the Nationwide Food Consumption Survey (NFCS) procedures, which excluded nonhousekeeping households, excluded value of expense-account meals that were reimbursed, excluded cost or partial cost of federally subsidized meals, such as school lunches and breakfasts, and excluded the nonhousehold population.

Income was associated more strongly with expenditures for food away from home than with money value of home foods (table 1). In 1977, although there was only a difference of \$1.37 in the money value used at home per household member between the lowest income group (under \$5,000) and the highest income group (\$20,000 or more), the expenditures for food bought away from home per member varied from \$2.52 to \$6.83—a difference of \$4.31. For the lowest income level, away-from-home expenditures accounted for only 14 percent of the total money value of food compared with 29 percent in the highest income interval.

Table 1. Money value per household member of food used in a week by housekeeping households,¹ spring 1977

Income (1976) before taxes	People living in household ²	Money value per household member ³		
		Total	At home ⁴	Bought away from home
	<i>Number</i>	<i>- - - - - Dollars - - - - -</i>		
All households	3.06	19.91	15.17	4.74
Under \$5,000	2.02	17.51	14.99	2.52
\$5,000-\$9,999	2.72	17.26	14.20	3.06
\$10,000-\$14,999	3.21	18.50	14.15	4.35
\$15,000-\$19,999	3.53	19.99	14.99	4.99
\$20,000 or more	3.67	23.19	16.36	6.83

¹Household with at least 1 person having 10 or more meals from the household food supply during 7 days preceding interview.

²Excludes roomers, boarders, and employees. Average value per household member calculated using population ratio procedure—aggregate value for all households divided by aggregate number of members in all households.

³Parts may not total to the whole because of rounding.

⁴Includes value of food that was bought, home produced, or received as gift or pay and used by household members and guests. Value of food received without direct expense by a household is based on average price per pound paid for that food by survey households in the same region.

Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary).

Money Value of Food at Home²

The average money value of food per person³ was 20 percent higher for the highest than the lowest income group (table 2). Of

²Estimates on the money value of food at home include value of food used at home by household members, roomers, boarders, employees, and guests that was bought, home produced, or received as gift or pay. Value of food received without direct expense by a household is based on the average price per pound paid for that food by survey households in the same region.

³A person considered to eat 21 meals at home during the past 7 days (based on 3 meals a day for 1 person) was used to adjust for variation among households in proportion of meals eaten from home food supplies. Average money value per person was calculated using population ratio procedure—aggregate value for all households divided by aggregate number of persons in all households.

particular interest is that the money value of food per person for the lowest income group, which averaged \$15.42, was comparable with that for the three middle-income groups. The possible reason might be that the Food Stamp Program provided the boost in expanding the demand for food among the low-income households.

In contrast, however, when respondents were asked whether they had enough and the kinds of food they wanted to eat, 9 percent of the lowest income group responded that sometimes or often they did not have enough to eat. Translated in terms of the U.S. population, 9 percent of the lowest income group, or 3 percent of the total population, represents several million people. At each successive income level, more households reported that they had enough and the kinds of food they wanted.

Table 2. Money value of food used at home per person per week,¹ spring 1977

Food group ²	Income (1976) before taxes					
	All income ³	Under \$5,000	\$5,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 and more
All food ⁴	\$16.44	\$15.42	\$15.17	\$15.39	\$16.04	\$18.46
Milk, cream, cheese	2.02	1.77	1.81	1.96	1.93	2.37
Meat, poultry, fish	5.64	5.50	5.11	5.22	5.82	6.32
Eggs, dry legumes, nuts ⁵ .....	.71	.75	.72	.77	.64	.71
Vegetables	1.96	1.93	1.98	1.78	1.83	2.10
Fruit	1.26	1.16	1.18	1.15	1.15	1.45
Grain products	1.96	1.85	1.82	1.89	1.86	2.20
Fats, oils .....	.48	.46	.48	.44	.46	.51
Sugar, sirup, jelly, candy ...	.43	.38	.39	.44	.40	.48
Soft drinks, punches, prepared desserts .....	.63	.59	.63	.63	.67	.67
Alcoholic beverages .....	.61	.39	.35	.47	.82	.87
Other foods .....	.74	.64	.70	.64	.48	.78
Household size in number of 21-meal persons	(2.82)	(1.96)	(2.55)	(2.95)	(3.30)	(3.25)

¹1 person considered to eat 21 meals from home supplies during 7 days.

²Mixtures and soups included with main ingredients except those mainly meat, which are included with eggs, dry legumes, and nuts.

³Includes households with income not reported.

⁴Includes value of food that was bought, home produced, or received as gift or pay and used by household members and guests. Value of food received without direct expense by a household is based on average price per pound paid for that food by survey households in the same region.

⁵Includes plate dinners with main items mostly meat, poultry, and fish.

Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary).

Money value of food used at home in 1977 did not appear to have kept pace with the money value in 1965, after adjustments were made for the rise in the Consumer Price Index (CPI) for food at home. The average money value of food at home per person (21 meals at home) was \$8.78 per week in spring 1965 and \$16.44 per week in spring 1977, an increase of about 87 percent. On the other hand, CPI of food at home rose 100 percent. The money value for some food items, of course, increased substantially more and others less than 100 percent. The difference in the money value of food used between the two periods appears to reflect the rise in food prices, the change in the types of foods used, and the change in the quantities of foods consumed by households.

Division of Home Food Dollar

Table 3 shows the distribution of the home food dollar spent (purchased food plus money value of nonpurchased foods used) in 1965 and 1977. Compared with those in 1965, households in spring 1977 allocated more money to meat, poultry, and fish; fruit; and soft drinks, punches, and prepared desserts. Further breakdown of the meat, poultry, and fish group showed the greatest changes occurring in the proportion of food dollar for poultry, from 3.7 to 4.2 percent, and then for fish, from 3.1 to 3.6 percent. Soft drinks, punches, and prepared desserts accounted for the greatest increase in the portion of the food dollar.

The decrease in share of the dollar for the eggs, dry legumes, and nuts group in 1977 was accounted for by a notable decline in the share for eggs, from 2.9 to 2.0 percent. Households used less of their home food money for the fats and oils group, possibly reflecting an increased concern about fat in diets. The decrease was due to butter, which dropped from 1.0 percent of the dollar in 1965 to 0.4 percent in 1977. The proportion for margarine remained about the same. The share of the food dollar for sugar, sirup, jelly, and candy also declined.

Detailed examination of the division of the food dollar indicates that it was different among the income groups. The most income elastic, or income responsive, food group was alcoholic beverages; the next was the milk, cream, and cheese group. The share of the food

dollar for these groups of food increased with increasing income. On the other hand, the lower income households used a much higher proportion of their food money for eggs and dry legumes than did higher income households. Some food groups, such as grain products and fats and oils, remained virtually inelastic throughout the income distribution spectrum.

Quantity of Food Used at Home

Much of the change in the dollar shares may be attributable to the differences in the average quantities of food used from 1965 to 1977. Consumption increased for four groups of food—meat, poultry, and fish; fruit; soft drinks; and alcoholic beverages—and decreased for milk, cream, and cheese; grain products; vegetables; eggs, legumes, and nuts; fats and oils; and sugar, sirup, jelly, and candy. Comparisons between the 1955 and 1965 surveys reveal a similar pattern; that is, the changes in direction that occurred for the average quantity per person from 1955 to 1965 continued to 1977.

Usage of food groups did not always change by the same percentage or even the same direction as did the division of the food dollar (tables 3 and 4). Although in most instances, a substantial increase in the quantity of food usually resulted in a corresponding increase in the proportion of the food dollar allocated to that food group, deviation in magnitude was found among some of the food groups—grain products; sugar, sirup, jelly, candy; and alcoholic beverages. Consumption of the group comprising sugar, sirup, jelly, and candy declined perceptibly; but the dollar share of this group fell much less, probably owing to a sharp rise in the price of candy. Similarly, although the quantity per person for grain products decreased, an increased use of commercially prepared products with higher prices might have lessened the impact on the dollar share.

Care should be used in interpreting these results because of a substantial change in food marketed since 1965. Quantities may have been lower in 1977 because of increases in dried food items and dried substitutes. The greater use of processed and commercially prepared foods may mean that the weight of

refuse is no longer included, or that the weight of water is included in some groups. Also, in 1977 more enriched and fortified foods were

used, and they may have weighed the same as those used in 1965 but may have differed appreciably in terms of nutrients.

Table 3. Division of food dollar used by households, spring 1965 and 1977

Food group ¹	1965	1977	Change from 1965
	- - - Cents - - -		Percent
Milk, cream, cheese	12.6	12.3	-2
Meat, poultry, fish	32.7	34.3	+5
Eggs, dry legumes, nuts ²	5.2	4.3	-17
Vegetables	12.2	11.9	-2
Fruit	7.4	7.7	+4
Grain products	12.3	11.9	-3
Fats, oils	3.5	2.9	-17
Sugar, sirup, jelly, candy	3.1	2.6	-16
Soft drinks, punches, prepared desserts	3.1	3.8	+23
Alcoholic beverages	3.7	3.7	0
Other foods	4.1	4.6	+12
Total	100.0	100.0	---

¹Mixtures and soups included with group of main ingredients, except those mainly meat, which are included with eggs, dry legumes, and nuts.

²Includes plate dinners with main ingredient mostly meat, poultry, and fish.

Source: USDA Nationwide Food Consumption Survey 1977-78, 48 conterminous States, spring 1977 (preliminary).

Table 4. Quantities of foods used by housekeeping households, spring 1965 and 1977

Food group	Average amount per person per week ¹		Change from 1965 ²
	1965	1977	
	- - - Pounds - - -		Percent
Milk, cream, cheese (milk equivalent) ³	8.76	8.34	-5
Meat, poultry, fish, and other protein food ⁴	5.69	5.70	*
Meat, fish, poultry	4.58	4.78	4
Eggs (fresh equivalent) .....	.82	.66	-19
Dry beans (dry weight) .....	.17	.12	-25
Nuts (shelled weight) .....	.12	.13	8
Vegetables ³	5.35	5.09	-5
Potatoes (fresh equivalent)	1.90	1.59	-17
Dark-green .....	.22	.30	36
Deep-yellow .....	.26	.24	-8
Tomatoes .....	.76	.71	-6
Fruit ³	3.73	3.94	6
Citrus (single-strength juice equivalent)	1.22	1.71	41
Other ascorbic acid rich fruits .....	.25	.31	25
Grain products (flour equivalent) ³	2.65	2.16	-19
Enriched or whole grain (flour equivalent) ³	2.08	2.05	-1
Fats and oils .....	.83	.70	-15
Sugar, sirup, jelly, candy	1.12	.83	-27
Soft drinks, punches, prepared desserts, ascorbic acid added (sugar equivalent) ...	.05	.12	144
Soft drinks, punches, prepared desserts, no ascorbic acid added (sugar equivalent)	.20	.22	11
Alcoholic beverages .....	.68	.94	38

*Less than 0.5 percent.

¹Average is calculated using a population ratio procedure; 21 meals from household food supplies equivalent to 1 person.

²Calculated prior to rounding.

³Includes mixtures and soups with main ingredient from group.

⁴Excludes mixtures, soups, and plate meals that consist mostly of meat, fish, poultry, eggs, legumes, or nuts.

NUTRIENT LEVELS AND FOOD USED BY HOUSEHOLDS, 1977 AND 1965

By Frances J. Cronin¹

IN SUMMARY

Differences in the quantity of food used by housekeeping households in the spring of 1977 and in the spring of 1965 were reflected in differences in energy and nutrient levels in food used. There was a 10-percent decline in the level of food energy, probably because of a decreased use of milk and dairy products, bread and cereals, fats and oils, and most foods high in sugar. The decline in food energy was not coupled with a decline in the level of vitamins or iron. Only the level of calcium in food used decreased. Therefore, the food used in the spring of 1977 had a higher nutrient density than that used in 1965.

Overall, the nutrient levels and quantities of food used were more uniform at the various income levels in 1977 than in 1965. The average nutrient levels for households in the lowest income group improved more than those in other income levels.

IN DETAIL

Calculations

The average quantities of food and nutrients from household food supplies are presented in terms of an "equivalent person." An equivalent person is equal to 21 meals eaten at home in a week (based on 3 meals a day). The equivalent person is used in an attempt to adjust for meals eaten away from home by household members and for meals and snacks eaten in the home by guests and employees. This measure would not account for the age or sex of people eating in the household; and, therefore, the nutrient values presented in this report are not comparable with the Recommended Dietary Allowances, which differ depending on age and sex. The average values were calculated using a population ratio procedure. Aggregate values for all households were divided by aggregate numbers of 21-meal-equivalent persons in all households.

¹ Home economist, Consumer and Food Economics Institute, Human Nutrition Center, Science and Education Administration.

The nutritive value of the food used is calculated for the edible portion of food as brought into the household. Only the vitamin values are adjusted for cooking loss. Thus the nutritive value of household food includes values not only of food eaten by people in the household but also of some food that is not eaten. This would include edible food discarded in the kitchen and at the table and leftovers fed to animals. Some households customarily do not eat all edible parts of certain foods, such as fat that can be trimmed from meat. Therefore, although this report shows the nutritive value of food available from household food, it slightly overestimates the food energy and nutrient levels of foods eaten in many households.

Spring 1977 and Spring 1965

Comparison of preliminary data on household food consumption for the spring of 1977 with data obtained for the spring of 1965 indicates that the food energy (calories) available declined about 10 percent, reflecting decreases in dietary fat, carbohydrate, and protein (table 1). At the same time, the levels of all vitamins and minerals except calcium were similar to or higher than those found in 1965. Nutrients that increased most since 1965 were ascorbic acid and thiamin. The decline in the level of calcium may be related to the smaller proportion of children and teenagers in the population. Milk products are the major source of calcium in the United States, and children and teenagers are their largest consumers.

The concurrent decrease in food energy and the increase in the amount of vitamins and iron indicate that food used by households in 1977 had a higher nutrient density than food used in 1965. The upward shift in the level of vitamins was the reverse of the trend seen between 1955 and 1965.

The changes in the average nutrient levels reflect differences in food use in 1965 and 1977 (see table 4 in "Household Food Consumption," by Mary Y. Hama). For example, the 5-percent decline in the consumption of

milk and dairy products on a milk-equivalent² basis was reflected in the decline in the calcium level. The total amount of meat, poultry, fish, and other high-protein food, such as beans, eggs, and nuts, was essentially unchanged. However, there were changes within this group. Beef, poultry, fish, and nut consumption increased, whereas the amounts used of pork (including bacon and salt pork), luncheon meat, eggs, and dry beans declined.

The decline in the average quantity of all vegetables used by households appears to have been due primarily to a decline in the use of potatoes at home. The use of dark-green vegetables increased. These vegetables are good sources of vitamin A and, if not overcooked, of ascorbic acid, as well as nutrients not detailed in this report, such as vitamin B₆, folacin, and magnesium.

The use of fruit, particularly citrus fruit, increased. This, coupled with the increased use of dark-green vegetables and ascorbic acid-fortified fruit drinks, punches, and ades, probably accounted for the large increase in the level of ascorbic acid in food used.

The use of bread and cereals declined on a flour-equivalent³ basis between 1965 and 1977. This decline did not cause a decrease in the levels of thiamin, preformed niacin, and riboflavin in the food used for two reasons. First, in 1975 the Federal standard for enrichment of flour and bread with these nutrients was increased. Second, the proportion of unenriched refined bread and cereal products declined markedly from 21 percent of all breads and cereals used in 1965 to 5 percent in 1977.

The decline in energy content of food used at home was a major change between 1965 and 1977. Of the energy-providing nutrients, carbohydrate declined the most. Contributing to the decline was the decreased use of bread and cereals, milk products, and sugar, sirup, jelly, and candy. However, not all high-sugar products declined. Consumption of soft drinks, punch, and sugar desserts increased, particularly those fortified with ascorbic acid.

The decline in fat reflects decreases in the household use of fats, oils, and milk products.

²Milk equivalent: Quantity of whole fluid milk to which dairy products (except butter) are equivalent in calcium.

³Flour equivalent: Weight of flour, cereals, meals, pastes, plus dry weight of flour, cereals, meals, and pastes in prepared and bakery products.

Table 1. Comparison of nutrient level in food used in housekeeping households in the United States, spring 1965-77

Nutrient	Average per person per day ¹		Percent change from 1965 ²
	1965	1977	
Food energy (cal)	3,210	2,900	-10
Protein (g)	106	102	-4
Fat (g)	154	140	-9
Carbohydrate (g)	353	307	-13
Calcium (mg)	1,110	1,070	-4
Iron (mg)	20	20	2
Vitamin A (IU)	³ 7,020	7,520	7
Thiamin (mg)	1.6	1.9	18
Riboflavin (mg)	2.4	2.6	7
Preformed niacin (mg)	25	27	8
Ascorbic acid (mg)	100	135	35

¹Average is calculated using a population ratio procedure; 21 meals from household food supplies in a week is equivalent to 1 person.

²Calculated prior to rounding.

³Adjustment made to reflect revised vitamin A value for eggs.

Also the use of fatty pork products (such as bacon) and luncheon meats decreased.

Comparison by Income⁴

In general, households at different income levels in 1977 used foods that were more similar in nutrient content and used quantities of the various food groups that were more similar than in 1965 (tables 2 and 3). The lower levels of nutrients noted on previous surveys for households in the low-income group are not apparent in the 1977 data. Although the use of foods from the milk group and the bread and cereal group by the low-income group declined, the consumption of foods from the meat, poul-

try, fish, and bean group and the fruit and vegetable groups increased.

The level of energy in food used by households declined 8 to 12 percent for households in all income groups between 1977 and 1965. The low-income group showed less of a decline than the middle-income groups, primarily because of a smaller decline in fat use. The level of protein in food used by the low-income group was essentially the same in 1977 as in 1965.

With the exception of calcium, the levels of vitamins and minerals in the low-income group increased between 1965 and 1977. The food used in these households contained appreciably more ascorbic acid, vitamin A, thiamin, pre-

⁴Income information obtained in 1977 is not directly comparable with that obtained in 1965. However, for the purpose of comparing the quantities and nutrients in food used in households at different economic levels, the total number of households reporting income in each of the 2 years was divided into five groups according to both income and percentages of households. For example, the group

with the lowest income contained all households reporting income of less than \$3,000 after taxes in 1964 (22.2 percent of the 1965 sample) and of less than \$6,000 before taxes in 1976 (21.6 percent of the 1977 sample). No adjustment was made for family size. Placement in the lowest income group does not mean that a household had an income that placed it below the poverty line.

Table 2. Comparison of the nutrient value of food used in housekeeping

Nutrient	Income group I			Income group II		
	1965 Less than \$3,000	1977 Less than \$6,000	Percent change from 1965 ²	1965 \$3,000- \$4,999	1977 \$6,000- \$10,000	Percent change from 1965 ²
<i>Average per person per day ³</i>						
1 Food energy (cal)	3,100	2,830	-9	3,180	2,840	-11
2 Protein (g)	98	99	1	102	99	-3
3 Fat (g)	143	136	-5	150	136	-10
4 Carbohydrate (g)	363	305	-16	359	307	-14
5 Calcium (mg)	1,080	1,010	-7	1,070	1,020	-5
6 Iron (mg)	19	20	4	20	20	1
7 Vitamin A (IU)	⁴ 6,470	8,130	26	⁴ 6,700	7,950	19
8 Thiamin (mg)	1.6	1.9	23	1.6	1.9	18
9 Riboflavin (mg)	2.2	2.5	12	2.3	2.5	9
10 Preformed niacin (mg)	23	27	15	24	26	8
11 Ascorbic acid (mg)	85	135	62	90	135	49
12 Percent of households	22.2	21.6		19.8	21.1	

*Less than 0.5 percent.

¹Includes only households reporting income. Income groups for 1965 based on 1964 income after taxes, and income groups for 1977 based on 1976 income before taxes.

²All calculations are completed prior to rounding.

³The statistical average is computed using a population ratio procedure; 21 meals from household food supplies in a week are equivalent to 1 person.

⁴Adjustment made to reflect revised vitamin A value for eggs.

formed niacin, and riboflavin than in 1965. The decreased use of milk and dairy products was probably most responsible for the decline in the level of calcium in the low-income group. This group also had the largest proportion of one-person adult households, which tend to use less milk and dairy products. The proportion was higher in 1977 than in 1965.

The decreased use of bread and cereal products by low-income households did not affect nutrient levels adversely because flour and bread products were more highly enriched in 1977 than in 1965, and because most of the decline was in the use of refined unenriched products. Households in the low-income group have always used more bread and cereal products than have households in other income groups. In 1977, however, differences between the low-income and higher income groups in use of these products were smaller than those in 1965.

The increased consumption of the meat, fish, poultry, and beans group of low-income

households reflects an increased use of all types of meat, fish, and poultry, except bacon and salt pork. The low-income group also decreased their use of eggs and beans. Households in this group consumed more pork, poultry, fish, and luncheon meat and less beef than did households in most higher income groups.

The use of vegetables by households in the lowest income group increased between 1965 and 1977. Quantities in 1977 were similar to or higher than those used by the other income groups. Although the home consumption of potatoes declined during the 12-year period, the use of all other types of vegetables increased. The low-income group used more dark-green and deep-yellow vegetables in 1977 than did households with higher incomes.

Households in the lowest income group also increased their use of fruits between 1965 and 1977. Most of the increase was in the use of citrus fruit and juices. The increase is equivalent to almost 2 cups of citrus juice per person per week between 1965 and 1977.

households in the United States, by income,¹ spring 1965 and 1977

Income group III			Income group IV			Income group V		
1965 \$5,000- \$6,999	1977 \$10,001- \$17,000	Percent change from 1965 ²	1965 \$7,000- \$9,999	1977 \$17,001- \$26,000	Percent change from 1965 ²	1965 \$10,000 or more	1977 More than \$26,000	Percent change from 1965 ²
<i>Average per person per day ³</i>								
1 3,210	2,850	-11	3,280	2,890	-12	3,300	3,020	-8
2 107	99	-8	110	101	-8	113	113	*
3 155	139	-11	160	139	-13	162	146	-10
4 349	302	-14	354	306	-14	347	308	-11
5 1,110	1,050	-5	1,150	1,080	-6	1,180	1,210	3
6 20	20	*	19	19	1	20	20	2
7 ⁴ 7,180	6,720	-6	⁴ 7,050	7,250	3	⁴ 7,830	7,750	-1
8 1.6	1.8	15	1.6	1.8	14	1.6	1.9	22
9 2.4	2.5	2	2.4	2.6	5	2.5	2.8	10
10 25	26	4	26	26	2	26	29	10
11 100	130	26	110	135	23	130	155	22
12 25.4	25.4		20.9	20.2		11.7	11.7	

Table 3. Change in quantity of foods used by housekeeping

Food group	Income group I			Income group II		
	Average pounds per person per week ²		Percent change from 1965 ³	Average pounds per person per week ²		Percent change from 1965 ³
	1965	1977		1965	1977	
	Less than \$3,000	Less than \$6,000		\$3,000- \$4,999	\$6,000- \$10,000	
Milk, cream, cheese (milk equivalent) ⁴	7.78	7.18	-8	8.13	7.75	-5
Meat, poultry, fish, and other protein food ⁵	5.25	5.86	12	5.55	5.59	1
Meat, fish, poultry	4.01	4.85	21	4.37	4.61	5
Eggs (fresh equivalent) .....	.86	.73	-15	.84	.70	-17
Dry beans (dry weight) .....	.28	.18	-38	.22	.18	-21
Nuts (shelled weight) .....	.10	.10	7	.11	.11	-4
Vegetables ⁴	4.83	5.16	7	5.18	5.23	1
Potatoes (fresh equivalent) ..	1.59	1.41	-12	1.91	1.62	-16
Dark-green .....	.29	.37	29	.22	.32	48
Deep-yellow .....	.23	.27	21	.25	.24	-4
Tomatoes .....	.60	.69	15	.67	.72	7
Fruit ⁴	2.94	3.65	24	3.17	3.78	19
Citrus (single-strength juice equivalent) .....	.83	1.66	100	.91	1.60	77
Other ascorbic acid rich fruit	.14	.25	-72	.19	.31	60
Grain products (flour equivalent) ⁴	3.20	2.35	-27	2.84	2.23	-21
Enriched or whole grain (flour equivalent) ⁴	2.70	2.26	-16	2.32	2.12	-9
Fats and oils .....	.86	.69	-19	.85	.71	-16
Sugar, sirup, jelly, candy	1.25	.82	-34	1.25	.85	-32
Soft drinks, punches, prepared desserts, ascorbic acid added (sugar equivalent) .....	.03	.08	207	.03	.12	247
Soft drinks, punches, prepared desserts, no ascorbic acid added (sugar equivalent) .....	.14	.18	30	.18	.21	22
Alcoholic beverages .....	.22	.62	186	.30	.67	74

*Less than 0.5 percent.

¹Includes only households reporting income. Income groups for 1965 based on 1964 income after taxes and income groups for 1977 based on 1976 income before taxes.

²Average is calculated using a population ratio procedure; 21 meals from household food supplies is equivalent to 1 person.

³All calculations completed prior to rounding.

⁴Includes mixtures and soups with main ingredient from group.

⁵Excludes mixtures, soups, and plate meals that consist mostly of meat, fish, poultry, eggs, legumes, or nuts.

households, by income,¹ spring 1965 and 1977

Income group III				Income group IV			Income group V		
Average pounds per person per week ²		Percent change from 1965 ³	Average pounds per person per week ²		Percent change from 1965 ³	Average pounds per person per week ²		Percent change from 1965 ³	
1965 \$5,000- \$6,999	1977 \$10,001- \$17,000		1965 \$7,000- \$9,999	1977 \$17,001- \$26,000		1965 \$10,000 or more	1977 More than \$26,000		
1	8.96	8.25	-8	9.36	8.73	-7	9.64	10.20	6
2	5.75	5.48	-5	5.78	5.52	-4	6.08	6.07	*
3	4.67	4.59	-2	4.76	4.68	-2	5.06	5.21	3
4	.82	.63	-23	.77	.62	-20	.79	.62	-22
5	.14	.11	-20	.10	.08	-25	.09	.08	-14
6	.13	.15	14	.14	.14	-1	.14	.17	19
7	5.39	4.74	-12	5.58	5.06	-9	5.80	5.20	-10
8	1.95	1.62	-17	2.08	1.69	-19	1.92	1.50	-22
9	.21	.26	26	.20	.26	34	.19	.24	23
10	.25	.19	-24	.26	.24	-11	.33	.26	-20
11	.79	.67	-15	.81	.69	-15	.93	.76	-18
12	3.72	3.61	-3	4.09	4.09	*	4.86	4.62	-5
13	1.18	1.46	24	1.40	1.74	25	1.79	2.21	23
14	.22	.26	20	.32	.30	-7	.41	.47	15
15	2.54	2.11	-17	2.49	2.02	-19	2.30	2.06	-10
16	1.97	2.00	1	1.87	1.90	2	1.65	1.96	19
17	.83	.70	-16	.82	.67	-19	.78	.69	-12
18	1.09	.85	-22	1.08	.80	-26	.96	.71	-26
19	.05	.11	119	.06	.13	142	.07	.14	88
20	.21	.24	11	.23	.26	14	.25	.20	18
21	.81	.96	19	.94	1.16	24	.97	1.29	33

NUTRIENT CONSUMPTION PATTERNS OF INDIVIDUALS, 1977 AND 1965

By Eleanor M. Pao¹

IN SUMMARY

Comparison of the average nutritive content of the diets of individuals based on the preliminary data from the Nationwide Food Consumption Survey in the spring of 1977 with data from the Household Food Consumption Survey in the spring of 1965 leads to the following conclusions:

1. Caloric intakes of all sex-age groups were lower in 1977 than in 1965.

2. Intakes of infants showed the sharpest drop of all sex-age groups from 1965 to 1977 for food energy, protein, fat, and calcium but a large increase for iron.

3. Intakes of food energy, protein, and fat appear to have decreased the least in older men and women, whereas calcium, vitamin A, and vitamin C intakes were higher in 1977 than in 1965 for this age group.

4. From 1965 to 1977, intakes of protein declined for all sex-age groups except men and women over 65 years of age, and fat intake declined for all sex-age groups.

5. Calcium intakes in 1977 were lower than in 1965 for infants, children, and teenagers but were close to or above 1965 levels for six of the eight groups of adults. Average intakes of females 12 years and over were 25 percent or more below the 1974 Recommended Dietary Allowances (RDA). Several groups of children and males had intakes that averaged about 10 percent below the RDA.

6. The iron intake of infants in 1977 was more than twice the intake in 1965. However, the average intake of 1- to 2-year-olds was much lower—about 45 percent below the 1974 RDA. Average intakes of females 12 to 50 years were between 35 and 40 percent below the RDA, as in 1965.

7. Vitamin C consumption increased considerably from 1965 to 1977.

8. Average intakes of the following nutrients met 1974 RDA for all sex-age groups: Protein, vitamin A, riboflavin, and vitamin C.

Thiamin and phosphorus intakes met RDA for all groups except one.

9. Vitamin B₆ intakes of infants, children, and some groups of teenagers met the 1974 RDA; however, intakes of adult groups were below RDA. Females 15 years and over had average intakes between 35 and 40 percent below the 1974 RDA. Men and girls 12 to 14 years had average intakes falling 7 to 22 percent below the standard. These conclusions must be taken with caution because food composition values for vitamin B₆ are still in the developmental stage.

10. Average intakes of magnesium were below 1974 RDA for nearly all sex-age groups, but food composition values for magnesium are likewise still in the developmental stage.

IN DETAIL

Caloric Intake

Caloric intakes of individuals in 1977 were lower on the average than those observed in 1965. Average intakes of energy for infants declined most, 34 percent. Young children, 1 to 5 years of age, had average intakes that were 15 percent less than in 1965. Caloric intakes of the oldest group of men and oldest group of women (65 years and over) dropped the least between 1965 and 1977. Among the groups of younger women and girls, average intakes were 5 to 10 percent less in 1977; for the men in similar age groups, the declines were slightly greater (10 to 15 percent).

Teenage boys, 15 to 18 years of age, had the highest caloric intake of any sex-age group in 1977, just over 2,700 kcal. In 1965, the largest average intake of energy was slightly over 3,000 kcal, by 18- to 19-year-old boys. Average intakes of calories for groups of men in 1977 decreased with age from about 2,500 kcal for 19- to 34-year-olds to 1,925 kcal for men 65 years and over.

Among girls and women, the highest average caloric intake in 1977 was for the group of 12- to 14-year-olds—1,920 kcal. The highest average caloric intake in 1965 was 2,150 for the same age group. A general reduction in caloric intake with age occurred in 1977 except the

¹ Home economist, Consumer and Food Economics Institute, Human Nutrition Center, Science and Education Administration.

group of 51- to 64-year-old women, whose intake was 1 percent greater than the younger group, 35 to 50 years of age.

When average caloric intakes for 1977 were compared with the 1974 RDA, intakes for all sex-age groups were below recommendations by about 10 to 25 percent. However, energy needs of individuals vary considerably according to body size, age, and physical activity; thus, there are individuals who need less than the recommended amounts. Groups with caloric intakes of more than 20 percent below the RDA for energy were infants, boys and girls 6 to 8 years, boys and girls 9 to 11 years, girls 12 to 14 years, and women 19 to 34, 35 to 50, and 65 years and over.

Average weights of people in most groups in 1977 were similar to average weights for 1965. Thus, the drop in caloric intake does not appear to be associated with loss of weight. Perhaps a sedentary life style is more common in the 1970's than in the 1960's.

Protein, Fat, and Carbohydrate Intakes

Generally, intakes of the three main energy-producing nutrients—protein, fat, and carbohydrate—decreased between 1965 and 1977. Average *protein* intakes of individuals in all sex-age groups decreased or remained the same. The infants' group showed the largest decline, about 40 percent below the 1965 level. Children in the 1- to 2-year-old group had the second largest decrease in average protein intake—about 15 percent below 1965 intakes. Average intakes of the older groups of children decreased less. In 1977, protein intake of girls 9 years and over and that for women less than 65 years of age ranged from 91 to 97 percent of 1965 intakes. For boys and men of the same ages, the range was 85 to 94 percent of the averages from the earlier survey. Averages for the men 65 years and over and the women in the same age group showed little change from average quantities of protein consumed in 1965.

The average intake of protein for infants decreased from 39 grams in 1965 to about 25 grams in 1977. This sharp drop in protein intake of infants may reflect a change in composition of baby formulas from those made with evaporated cow's milk, as was common in the 1960's, to the formulas developed to resemble human milk in the 1970's. Human

milk has about one-third as much protein as cow's milk.

In addition to having the largest caloric intake, the 15- to 18-year-old boys had the largest average intake of protein, 107 grams, in 1977. The largest average protein intake in 1965 was 118 grams for the 18- to 19 and 20- to 34-year-old groups of boys and men. Protein intakes of men in 1977 decreased with age to about 80 grams in a day for the men 65 years and over.

Among the age groups of females in 1977, girls 12 to 14 years of age had diets with the highest average intake of protein, about 75 grams. Intakes for women 19 to 65 were about the same, 64 to 67 grams, decreasing to 60 grams for the oldest group.

Although average protein intakes were lower in 1977 than in 1965, average quantities in 1977 were more than adequate to meet the 1974 RDA for all groups. Also, despite the reduction in average intakes of protein, the percentage of calories from protein was up slightly for all groups except infants.

Average *fat* intakes decreased considerably in 1977 from 1965; the difference was about 20 percent for almost half the groups. However, the drop for the infants' group was exceptionally large; the average was about 45 percent less in 1977 than in 1965. The reason for this large decrease is not yet known, but the data will be analyzed further. The elderly men's and elderly women's groups showed the least change, about a 6- to 8-percent decline. Average fat intakes of the groups of boys and younger men generally decreased a little more than the intakes for the same age groups for females from spring 1965 to spring 1977. (Levels in 1977 were 80 to 86 percent of 1965 values for the groups of males and 85 to 90 percent of 1965 values for the female groups.)

In 1977, the largest average intake of fat for any sex-age group was the 125 grams consumed by the 15- to 18-year-old boys. This quantity is markedly lower than the highest average fat intake of almost 150 grams for 18- to 19-year-olds in 1965. Intake was lower for successively older age groups, and the average fat intake of men 65 years and over was about 90 grams. Of females, girls 12 to 14 years of age evidenced the highest group average for fat, 85 grams. Women's intakes were around 70 to 75 grams, except for older women. The average

intake for women 65 years and over was about 65 grams. The percentage of calories derived from fat was lower in 1977 than in 1965 for all sex-age groups. The steep drop for infants, from 39 percent in 1965 to 29 percent in 1977, made them the only group to meet the American Heart Association recommendations that call for less than 35 percent of energy in the diet coming from fat. Fat as a source of energy in men's diets decreased from about 45 in 1965 to 42 percent in 1977, still well above the recommended amounts. A slightly greater decrease in the proportion of calories from fat appeared in the oldest women's group than in the oldest men's group. The oldest group of men had the highest proportion of energy from fat indicated by the preliminary data from the 1977 survey. Although these men have lived past 65 years of age, data on their own appraisals of their health status have not been summarized as yet. These data will be of considerable interest because high dietary intake of fat is considered by many health professionals to be a risk factor for heart disease.

Total *carbohydrate* consumption for most groups fell between 1965 and 1977. Exceptions were men 65 years and over and the two oldest groups of women (51 to 64 and 65 years and over). (The proportions of carbohydrate coming from natural and added sugar and from starches are not available.) The decline was about 1 to 8 percent for girls and women less than 50 years of age and about 5 to 12 percent for boys and men less than 65 years of age. However, the reduction for infants (about 25 percent) was considerably greater than that for all other sex-age groups.

Boys 15 to 18 years of age had the highest average intake of carbohydrate—about 300 grams—in 1977 compared with the high of 315 grams in 1965. The 9- to 11-year-old girls had the highest average intake—225 grams—of all female groups in 1977, fractionally lower than the high of 235 grams in 1965 consumed by the 12- to 14-year-old groups of girls.

Even though the absolute amount of carbohydrate was down in 1977, the proportion of calories from carbohydrate was up. About 50 percent of the energy intake of infants came from carbohydrate. Around 40 percent of the energy intake of men, 19 to 64 years of age, came from carbohydrate. The proportion for women in this age range was almost the same,

about 42 percent. The oldest group of men and of women obtained a slightly higher percentage of their calories from carbohydrate (42 and 46 percent) than younger adults but not as much as the children's group (48 percent).

Mineral Intakes

Calcium intakes were lower for infants, children, and teenagers in 1977 than in 1965. For most adult groups, average intakes were close to or above 1965 levels. Increases in average intakes of calcium occurred for the oldest group of men and for the two oldest groups of women. The sharpest drop in average intakes of calcium was found for the infants, a decline of more than 40 percent. Here, as for protein, the decline may be due to the change in baby formulas from those based on cow's milk to formulas simulating breast milk, which has less than one-third as much calcium as cow's milk.

Nevertheless, the average intake of calcium for infants in 1977 was well above the 1974 RDA. Average intakes of calcium in 1977 ranged from 10 to 20 percent lower for children and from 3 to 15 percent lower for teenagers than in 1965.

The largest average intake of calcium for 1977 was for teenage boys, 15 to 18 years of age, followed closely by the intake of the next younger age group of boys. In 1977, these two groups were the only ones with intakes exceeding 1,000 mg of calcium, whereas in 1965, infants and boys 9 to 11 years of age also had average intakes above 1,000 mg of calcium. The highest average intakes of calcium in 1977 among female groups were found for 9- to 11 and 12- to 14-year-olds. Average calcium intakes of adults generally decreased for successively older age groups, but a slightly higher average was evident in the oldest group for both sexes.

Among the 18 sex-age groups, 5 had average intakes of calcium in 1977 that met or exceeded the 1974 RDA for their group: Infants, 6- to 8-year-old children, and males 9 to 11, 15 to 18, and 19 to 34 years of age. Average intakes for the other groups of children and boys met 90 percent or more of the RDA for their group. However, females in age groups 12 years and over had average intakes that ranged from 64 to 74 percent of the 1974 RDA. Since these are averages for age groups, we must conclude that many individuals had

intakes of calcium that were much below recommended levels.

Analysis of frequency distributions or percentiles of both the 1- and 3-day intakes of calcium will provide more insight. Despite the improvement in the calcium intake of the women 65 years and over, the calcium intakes of the other groups of females, 12 years and over, were about the same in 1977 as in 1965.

Average intakes of *iron* increased in 1977 over 1965 for many sex-age groups. The increased iron intake of infants was especially dramatic, well over twice the 1965 value. However, the 1- to 2-year-olds in 1977 had an average intake only half as high as that of infants. Thus, although the average iron intake of infants was more than adequate to meet 1974 RDA, the average intake of the group just beyond infancy (1- to 2-year-old group) was only 55 percent of the RDA. Average intakes of the 3- to 5-year-olds more nearly met recommendations and those of the 6- to 11-year-olds exceeded them. The improvement in average intake of iron for infants is the result of increased iron fortification of baby cereals and baby formulas since the 1965 survey. The average intake masks the probable existence of some infants with low intakes and possibly some with unusually high intakes of iron because of being fed both iron-fortified cereal and iron-fortified formula. Whether the infants with high intakes were also given iron supplements is a question that can be addressed later with survey information.

In 1977, average iron intakes of the groups of men exceeded 1974 RDA by a considerable margin. Intakes of two groups of boys were slightly below the recommendations even though their average intakes were up. Average intakes of females in the groups 12 through 50 years of age met about 60 to 65 percent of the RDA for their groups in 1977, practically the same as in 1965.

Magnesium intake in 1977 was somewhat less than estimates for 1965 for infants and most groups of children and teenagers. However, 1977 intakes were higher for most groups of adults, especially the oldest adult groups. Average intakes of magnesium for children under 9 years of age were in the range of 150 to 220 mg, for girls and women around 215 to 240 mg, and for boys and men about 245 to 320 mg. When compared with the appropriate

1974 RDA, average intakes for infants and 1- to 2-year-olds met recommendations and the other groups of children were only slightly below recommendations. For the groups of boys and men, average intakes of magnesium met between 80 and 89 percent of 1974 RDA. Comparable age groups of girls and women had averages supplying 69 to 79 percent of 1974 RDA with the exception of the 9- to 11-year-old girls whose intake met 90 percent of the recommended levels. However, there is greater uncertainty in the comparisons because reliable magnesium data are not generally available for use in calculating magnesium values of diets such as those reported here.

Phosphorus consumption was calculated for the first time in 1977. Average intakes of all groups appear to meet 1974 RDA, except the group of girls 15 to 18 years.

Vitamin Intakes

Vitamin A intake for all but four groups was down in 1977 from 1965 levels; the exceptions were the 6- to 8-year-old children, the oldest group of men, and the two oldest groups of women. The decline in the average vitamin A intake for infants was 35 percent. For the children and teenagers, the difference between 1965 and 1977 was much less, ranging from 14 to 18 percent for the girls and 6 to 13 percent for the boys. The 19- to 34-year-old men's and women's groups had average intakes for 1977 that were 25 percent below those in 1965. Although 1977 intakes were down from 1965, they were sufficient to meet the 1974 RDA for all groups. In contrast to some other nutrients in the diet, the average vitamin A intakes for adult groups in this sample generally increased for successively older age groups, although the 51- to 64-year-old group of men had an intake that slightly exceeded the intake of the oldest men. It may be that the older adults are consuming more vitamin A rich foods, such as dark-green vegetables.

Ascorbic acid intakes in 1977 were considerably higher than average intakes in 1965, with levels ranging from 20 to 80 percent over 1965 values. Fortification of beverages and other foods with vitamin C and increased consumption of citrus fruit and juice contributed substantially to the increase.

Average intakes of *thiamin* increased in 1977 over 1965 for all groups except one (19- to 34-year-old men), in which the average was nearly the same for both surveys. Average intakes of all groups exceeded the 1974 RDA except the 19- to 34-year-old women, whose intake just missed meeting the recommended level.

Riboflavin intakes of infants and children decreased between 1965 and 1977. The average intake for infants dropped most, almost 30 percent. Yet their intakes, when expressed as a percentage of 1974 RDA, exceeded the recommendation by more than 100 percent. Average intakes of men and women, 65 years and over, were up, but those for the younger adult groups were down slightly from 1965 levels. Nonetheless, average intakes met or exceeded 1974 RDA for all groups.

Vitamin B₆ intakes were higher in 1977 than those estimates for the 1965 survey except for infants, 1- to 2-year-olds, men and women of

19 to 34 years of age, and men 35 to 50 years of age. Average intakes of infants and children in 1977 exceeded 1974 RDA, but intakes of adults were below the RDA. The average intake of vitamin B₆ for men 65 years and over provided 78 percent of the RDA. For the younger groups of men, average intakes provided 88 to 99 percent of the RDA. However, for the groups of females 15 years and over, average intakes were only 60 to 65 percent of RDA, indicating that vitamin B₆ may be a special dietary problem for older teenage girls and women of all ages. Reliable food composition values for vitamin B₆ have been difficult to obtain because of inadequate analytical methods and are not available for a considerable number of foods. The calculated content of the vitamin B₆ for these diets is an estimate based on the best information currently available, but the reliability is less certain than for other nutrients.

NATIONWIDE FOOD CONSUMPTION SURVEY—IMPLICATIONS

By D. Mark Hegsted¹

What conclusions can we or should we draw from the data available so far?

I prefer to begin by noting some of the limitations, or possible limitations, in the data so that we don't overinterpret the findings. The average household or the average person doesn't really exist. So, although average values are important and flag changes in consumption, they never tell us quite what we would like to know. If consumption of something stays the same, increases, or decreases as a whole, various groups within the population can be expected to show different trends. The more the data are broken down into specifics, the more useful the information is nutritionally. On the other hand, individuals within any group will also vary substantially. We cannot monitor the intake or nutritional status of every individual, so we do have to deal with groups. Whatever we conclude, the limitations of statistical data need to be kept in mind.

Although it is not very useful in helping to interpret data, it is at least worth noting that questions can be raised about the reliability of data collected in such surveys. The food supply is now exceedingly complex and becomes more so all the time. Our knowledge of food composition always lags behind our needs and always will. Some of the apparent changes in consumption may reflect inadequacies in the data base and, thus, our interpretation may change with time as the data base improves. Nevertheless, most of us believe that consumption data are a reasonable reflection of what groups of people do, although we know that they do not reflect what individuals do. The average values reported here agree reasonably well with average values reported by HANES,² for example,

¹ Administrator, Human Nutrition Center, Science and Education Administration.

² Health and Nutrition Examination Survey. See "Dietary intake findings—United States, 1971-1974," 1977, Vital and Health Statistics, Series 11, No. 202, data from the National Health Survey, U.S. Department of Health, Education, and Welfare, Public Health Service (DHEW Pub. No. HRA 77-1647).

and thus give us some confidence. Nevertheless, there is still relatively little hard evidence to compare what people eat with what they say they eat. Additional efforts are required to improve our methodology, although I do not expect major improvements other than, perhaps, improvements in methods to handle the information collected.

As Eleanor Pao has indicated in the total food article on p. 16, total food consumption of Americans—practically across the board—appears to be at a very low level. This in spite of the fact that we are as big and fat as we ever were and obesity may be gaining on us. About the only interpretation possible at this time would be that Americans are becoming increasingly sedentary. It raises many questions. Can optimal health be achieved by simply reducing food intake to control obesity? Although many people have a firm faith in the benefits of exercise, there is little hard evidence on what is achieved by various amounts of exercise. Indeed, in the report of the Panel on Obesity of the American Society of Clinical Nutrition,³ there remain many questions about what is actually achieved by weight-reducing programs even when they are successful. Obviously for Americans as a whole, the emphasis on weight and obesity over the past many years may have reduced food consumption but has not achieved what is thought to be desirable.

These low levels of food consumption make it increasingly difficult for many Americans to achieve the rather generous levels of nutrients specified in the Recommended Dietary Allowances. The Food and Nutrition Board has repeatedly warned that consumption of less than the RDA does not mean an individual is deficient in that nutrient, yet we must also assume that this Board does believe that consumption at these levels is desirable. What are we to make of the proposition that the average American woman consuming a mixed and well-balanced diet cannot obtain the RDA for several nutrients? It is one thing to conclude that a proportion of any group is at risk of deficiency because of poor food choice or inadequate supplies. It is something else to

define the average American at risk of deficiency.

These low levels of consumption are of interest in that recent estimates place the national food supply at about 3,500 calories per person per day. Our survey results indicate that about 2,900 of these calories actually enter the household, but only 1,800 to 1,900 calories are actually consumed. Where does all that food go? Do we really waste almost half of the total food available or feed it to cats and dogs? How much redundancy in our total food supply is required to adequately nourish our population? We can all list many factors that encourage waste—the decreasing size of families, the way foods are packaged, the way food is served in restaurants, and so forth. Yet, it should be of considerable interest to find out what actually happens. Are there 3,500 calories of edible food? If we envisage a limitation in food supplies some 10 or 20 years down the pike, there would appear to be great opportunities for conservation of food in the same way that there are opportunities for conservation of energy—the two are not unrelated.

The data are encouraging in that they indicate the spread in dollars spent for food and that the kinds of food consumed at various income levels are diminishing. The programs of the 1970's have assisted the lower income groups so that they more nearly participate in our abundant food supply. At the same time, 3 percent of all households report that they do not have enough food, and this rises to 9 percent in the low-income groups. As Mary Hama has emphasized in the article on p. 4, this is still a lot of people and much remains to be done, especially in a country that may waste nearly half of the total food available.

Secretary Bergland has warned us that we should be very clear about the problems of the poor when we talk about food costs. It is important to note that although we continually complain about food costs and other faults of the food system, for most Americans, food costs are low compared with those for most of the world. Most Americans would not willingly trade what American agriculture and our food system have achieved with that available in other parts of the world.

Incidentally, it is of substantial interest in terms of the total world food problem to note that the average calorie consumption of Ameri-

³"Symposium report of the task force on the evidence relating six dietary factors to the Nation's health," 1979, *The American Journal of Clinical Nutrition*, Vol. 32, No. 2, December Supplement.

cans at 1,800 to 1,900 calories per day is not greatly different from that reported in many of the developing countries where undernutrition and malnutrition are common. Yet, how many Americans are hungry? There are problems of definition as well as distribution and, again, how much redundancy in food supplies is actually needed to minimize or prevent undernutrition.

I avoided the term malnutrition in the last sentence because there is abundant evidence that Americans are not optimally nourished and that a major problem is excessive consumption—excessive consumption of fat, cholesterol, sugar, salt, and alcohol, as well as total calories. The latter, as I have indicated, is somewhat hard to square with the apparent level of energy consumption, obesity, and estimated energy requirements. This does not mean we are not concerned with essential nutrients, but we are still caught to a considerable degree in traditional methods or areas of concern. Although we are concerned and must keep watch on consumption of thiamin, riboflavin, niacin, vitamin C, and so forth, these do not represent the major nutritional concerns of the U.S. population or the major problem areas. With regard to essential nutrients, the problem areas would appear to be iron, zinc, magnesium, vitamin B₆, and so forth—nutrients where there is a substantial difference between levels specified by the RDA and consumption levels. Because these are emerging interests, our data base is less adequate.

Many of the problems are obvious to all of us. These include a better definition of requirements, analytical methods, problems related to bioavailability, and the evaluation of nutritional status. We now know, for example, that total iron content of the diet is probably less important than the form of iron in the diet and the nature of the diet with which it is consumed. The research effort that will be required to provide a better evaluation here is quite clear.

Similarly, comparative data from 1965 to 1977 on fat, cholesterol, salt, and sugar are less than adequate because of our shifting interests. These were not major considerations in prior surveys. Although Americans are apparently consuming somewhat less fat than previously (which is desirable), it has not changed much. I expect that many are actually doing better

than these values indicate, since it seems reasonable that a substantial amount of fat might be trimmed from meat at the table and may not be adequately accounted for in the calculations.

As we are aware, we cannot calculate sugar and salt consumption from these data. Other data on total available sweeteners indicate an increase which, when combined with a fall in total calories consumed, indicates a higher proportion of the total calories in sugar and sweeteners. This is an undesirable trend. It is worth noting that the role of sugar in dental caries is more related to the kind of product consumed and when it is consumed than the total amount consumed. The data indicate that consumption of sugar, sirup, jelly, and candy has decreased, which may be a favorable trend. It probably is due to greater use of sugar in processed foods rather than use of sugar as such in the household. Together with an increase in soft drink consumption, I conclude we are not gaining in this area.

Increased consumption of alcoholic beverages, again combined with a falling total food consumption, is probably undesirable, although I am a believer in moderation in all things.

As I have indicated, future reports will provide a greater breakdown of the data both in terms of who eats what and the products actually eaten, which will be instructive. For example, the data available group eggs, legumes, and nuts together. This makes sense in traditional terms as good sources of protein other than meat and dairy products but is less helpful at this time. Protein consumption is now at a very high level and, in general at least, it would seem that we need not place much emphasis on protein. In contrast, there are valid reasons to encourage legume consumption—fiber, vegetable fat, and the current low levels of consumption—and so more specific data will be useful. Although there are valid reasons to encourage increased consumption of dietary fiber (and we know something about sources of dietary fiber), the analytical methods available are inadequate to deal properly with this topic.

Let me urge everyone to recognize both the value and the limitations of these kinds of data. Statistical data can be exploited for a variety of purposes both legitimate and illegitimate and I urge everyone to try to use them honestly and constructively.

CLOTHING AND TEXTILES: SUPPLIES, PRICES, AND OUTLOOK FOR 1980¹

By Joan C. Courtless²

CLOTHING EXPENDITURES AND PRICES

Consumer Spending

Annual spending for clothing and shoes averaged \$441 per person, according to preliminary figures for the first three quarters of 1979—up 5.8 percent over 1978 (table 1). Of this increase, 62 percent was attributable to price increases and 38 percent was a real increase in spending. The real increase, however, was considerably less than a year earlier when 62 percent of the increase in per person spending was due to increased buying:

Year	Increase in spending per capita over previous year in--		Percent of increase attributed to--	
	<i>Constant dollars</i>	<i>Current dollars</i>	<i>Real buying</i>	<i>Increased prices</i>
1975	9	20	45	55
1976	10	24	42	58
1977	10	25	40	60
1978	25	40	62	38
1979	9	24	38	62

This slowdown in real spending may reflect continuing pressures on the family pocketbook from inflation, increased social security taxes, and higher income taxes caused by cost-of-living wage increases that have pushed families into higher tax brackets.

Retail Sales

The slowdown in real spending is also reflected in retail sales, which, when adjusted

for inflation, have been declining since the end of 1978. The large amount of consumer spending late in 1978, in anticipation of higher prices, together with a heavy level of consumer debt, and the effects of the energy situation, made buying patterns sluggish. During the summer, trade papers reported, "Women have no time for shopping—they're waiting in gas lines." People shopped around by telephone rather than by car. With the 78° ruling, enclosed malls and stores became humid and muggy and discouraged browsing and buying.

Anticipating winter 1979-80 and the 65° mandate, stores stocked up on sweaters and three-piece suits. Spring 1980 merchandise will include a higher percentage of short-sleeved shirts and two-piece suits.

Selling well in 1979, according to trade papers, were—

- Sportswear—the gasoline shortage kept people closer to home.
- Spectatorwear (cross between sportswear and loungewear)—for increased leisure time, comfort, and multipurpose use.
- Quality and versatility instead of high style—buying fewer well-made clothes that can be worn several ways and last a long time are bargains in the long run. Sportscoats, separates, dark colors, traditional silhouettes, and clothes made of 100 percent wool or cotton were in demand.

Consumer Prices

Prices in 1979 for apparel and footwear, as measured by the Consumer Price Index (CPI), increased 4.2 percent over 1978. This increase was less than the 10.9-percent increase for the all items category of the CPI (table 2).

This relatively modest gain in prices contrasts with the "considerable increases" that consumers say they are seeing in clothing prices. It may be explained in part by the nature of the CPI. The CPI measures the change in cost over time of a fixed market basket of goods and services. The content of the market basket is kept unchanged as much as possible. Items are selected based on data col-

¹Information here is based on reports available during January through October 1979. Discussion of business trends is based on trade reports or news items in the Daily News Record, the Wall Street Journal, the Washington Post, the Baltimore Sun, Business Week, and Knitting Times. Other sources include Textile Organon L(9), September 1979; U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, Cotton and Wool Situation, CWS-18 and CWS-20 (1979); U.S. Department of Commerce, Bureau of the Census, Current Population Report, P-25 (812), September 1979; U.S. Department of Labor, Bureau of Labor Statistics, News (Consumer Price Index monthly reports).

²Home economist, Family Economics Research Group, Science and Education Administration.

lected in the Consumer Expenditure Surveys of the Bureau of Labor Statistics—the last of which was 1972-73. The CPI does not reflect immediately changes in expenditure patterns nor adjust to new goods and services. Choices in clothing made by consumers are particularly sensitive to changes in fashion, and “high-style” merchandise—often commanding premium prices—is not necessarily included in the CPI. Also, even though the original ticket prices of garments may be higher than those of comparable items previously available, retail

practices such as discount pricing and earlier markdowns mean that a decreased proportion of consumer clothing purchases are at the originally marked price. The CPI takes into account the price at which a garment is offered for sale.

Within the overall CPI category of clothing and footwear, men’s furnishings; boys’ coats, jackets, sweaters, and shirts; boys’ furnishings; jewelry and luggage; and footwear increased relatively more than other clothing items between September 1978 and September 1979 (table 3).

Table 1. Annual expenditures on clothing and shoes¹

Years	Per capita expenditures ²		Percent of expenditures for personal consumption		Aggregate expenditures	
	Constant dollars (1972)	Current Dollars	Constant dollars (1972)	Current dollars	Billions of constant dollars (1972)	Billions of current dollars
1960	203	148	8.1	8.2	36.6	26.7
1961	203	149	8.1	8.2	37.3	27.4
1962	209	154	8.1	8.1	38.9	28.7
1963	209	156	7.9	7.9	39.6	29.5
1964	222	166	8.1	8.0	42.6	31.9
1965	227	172	7.9	7.8	44.2	33.5
1966	239	186	8.0	7.9	46.9	36.6
1967	236	192	7.8	7.8	46.9	38.2
1968	242	208	7.7	7.8	48.6	41.8
1969	245	223	7.6	7.8	49.6	45.1
1970	240	227	7.4	7.5	49.2	46.6
1971	249	244	7.5	7.6	51.6	50.5
1972	264	264	7.5	7.5	55.1	55.1
1973	281	291	7.7	7.6	59.2	61.3
1974	279	308	7.8	7.3	59.1	65.3
1975	288	328	7.9	7.2	61.4	70.1
1976	298	352	7.8	6.9	64.2	75.7
1977	308	377	7.8	6.8	67.4	82.4
1978	333	417	8.1	6.8	72.7	91.2
1979 ³	342	441	8.2	6.6	75.5	97.2

¹Includes yard goods but excludes services, such as cleaning and repairing clothing and shoes.

²Calculated by dividing aggregate expenditures for each year by population figures for July of each year.

³Preliminary figures--average of estimates for first 3 quarters of 1979 (i.e., seasonally adjusted quarterly totals at annual rates).

Sources: U.S. Department of Commerce, Bureau of the Census, 1979, Population estimates and projections, Current Population Reports, Series P-25, No. 812. U.S. Department of Commerce, Bureau of Economic Analysis, 1978, Survey of Current Business (table 11) 59(7): 19; and personal communication with Bureau of Economic Analysis.

SUPPLIES OF RAW MATERIALS

U.S. mill use of total fibers in 1979, based on data for the first 9 months, is estimated to be 58.8 pounds per capita. This includes 13.8 pounds of cotton, 0.5 pound of wool, and 44.5 pounds of manmade fibers. This compares with 1978 per capita use of 56.7 pounds, including 13.9 pounds of cotton, 0.5 pound of wool, and 42.3 pounds of manmade fibers.

Cotton

The 1979 cotton crop is expected to be about 13.7 million bales, 26 percent more than last year. The price of cotton has been relatively stable and is becoming more competitive with polyester. By 1985, any price advantage polyester has enjoyed over cotton since its introduction probably will disappear. This is due in part to the rising price of crude oil. It is estimated that for each rise of \$1 in the price of a barrel of crude oil, the cost of producing 1 pound of polyester increases \$0.01, and the cost of producing 1 pound of cotton increases \$0.007. During 1979, prices of manmade fibers were raised three times.

Whereas 10 years ago, cotton was considered "outdated," today's consumer appreciates the comfort-enhancing advantages of cotton and

regards it as desirable enough to be a trendsetter. The 100 percent cotton durable-press shirts are selling extremely well at \$2 more than the 65 percent polyester, 35 percent cotton blend. At least five manufacturers are increasing production of these shirts. Cotton is also being used as a year-round sweater fiber.

A major concern of scientists in agriculture and the cotton industry is the health hazard associated with the processing of cotton. During the coming year, the National Academy of Sciences' National Research Council, in a study funded by the U.S. Department of Agriculture, will investigate the causes of byssinosis, or "brown lung." This disease affects the breathing capacity of some persons who handle cotton and other fiber crops and is presumably caused by one or more parts of the dust that workers breathe on the job. As yet, the causative agent has not been identified. Meanwhile, the problem is being attacked from several directions:

- Cotton breeders are devising methods of lowering cotton dust through genetic changes in the plant itself, and other scientists are looking at entirely new ways to harvest and gin cotton to reduce dust and preclude contamination.

Table 2. Annual percentage change in selected indexes of consumer prices

Consumer Price Index	1975	1976	1977	1978	1979 ¹
All items	+9.1	+5.8	+6.5	+7.6	+10.9
Apparel and upkeep	+4.5	+3.7	+4.2	+3.4	+4.2
Men's and boys' clothing	+4.3	+3.5	+4.6	+2.3	+2.3
Women's and girls' clothing .	+2.4	+2.8	+3.2	+1.8	+1.8
Footwear	+4.4	+4.0	+4.7	+4.0	+7.7
Other apparel commodities ² ..	--	--	+4.6	-0.1	+6.6
Infants' and toddlers' clothing ³	--	--	--	--	+2.9

¹Preliminary estimates--average for first 3 quarters of 1979 compared with the average for first 3 quarters of 1978.

²Developed in 1976; includes sewing materials and notions, jewelry, and luggage.

³Developed in 1978.

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1979, News, Consumer Price Index (monthly issues); and personal communication with Bureau of Labor Statistics.

Table 3. Percentage change in selected index of consumer prices from
September 1978 to September 1979

Consumer Price Index	Percent change
All items	+12.4
Apparel and upkeep	+4.6
Men's and boys' clothing	+2.4
Men's:	
Suits, sport coats, and jackets	-1.4
Coats and jackets	-2.7
Furnishings and special clothing	+6.3
Shirts	+4.7
Dungarees, jeans, and trousers	+1.1
Boys':	
Coats, jackets, sweaters, and shirts ...	+6.2
Furnishings	+7.5
Suits, trousers, sport coats, and jackets	+2.2
Women's and girls' clothing	+1.5
Women's:	
Coats and jackets	+1.5
Dresses	-1.3
Separates and sportswear	+0.5
Underwear, nightwear, and hosiery	+4.5
Suits	+2.2
Girls':	
Coats, jackets, dresses, and suits	+0.1
Separates and sportswear	+1.1
Underwear, nightwear, hosiery, and accessories	+3.0
Infants' and toddlers' clothing	+3.8
Other apparel commodities	+7.9
Sewing materials and notions	+2.8
Jewelry and luggage	+10.0
Footwear	+8.9
Men's	+10.8
Boys' and girls'	+9.2
Women's	+7.1

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1978, CPI Detailed Report September 1978, and personal communication with Bureau of Labor Statistics.

- Improving engineering controls for the capture and removal of respirable dust through air-handling systems and in the working atmosphere of textile plants.
- Spraying minute amounts of mineral oil on the cotton during early processing steps to reduce dust generation.
- Removing the causative agent by water washing or chemical deactivation of raw cotton.
- Substituting rayon and polyester for cotton in blended yarns and fabrics.

Ways of producing yarn without twisting have been studied both in the United States and in Europe. Inserting twist is the highest cost factor in yarn production. When a no-twist method is used, productivity, or amount of yarn produced in a specified time period, is vastly increased and costs are lowered. Also, knitted tubular fabric made of a no-twist yarn will not twist out of square during wet finishing processes or when washed. Scientists at USDA's Southern Regional Research Center have developed a new method for producing a no-twist cotton yarn that could become commercially feasible in the future.

Wool

U.S. wool production in 1979 is estimated at 1 percent below 1978 and 6 percent below 1977. Wool growers plan a 50-percent increase in wool production in the next 10 years to meet anticipated increased consumer demand for both wool and lamb. U.S. farm prices for wool in 1979 were about 10 cents per pound higher than in 1978.

World wool prices are greatly influenced by the Australian Wool Corporation (AWC). The AWC attempts to stabilize prices in the Australian wool market by stockpiling wool when prices decline and placing these wools on the market to increase supply as prices go up. Australian wool prices have been increasing this fall and the AWC has reduced its wool stock by over 80 percent (800,000 bales) from its October 1978 level.

Manmade Fibers

Shipments of manmade fibers by U.S. producers during the first 8 months of 1979 were 11 percent above a year earlier. Manmade fiber domestic shipments for each of the first two

quarters of 1979 were at record high levels, exceeding a billion pounds for the first time. Nylon and polyester constituted 75 percent of the total domestic shipments.

According to trade reports, growing world affluence will increase world textile consumption. Because of the need for land to grow food and the many costly processing steps in producing spun (natural) yarns, manmade yarns are expected to supply most of this increase. New manufacturing techniques could be used to introduce texture to filament yarns and thereby improve appearance and increase the comfort factor.

Silk

Imports of raw silk for the first 8 months of 1979 were 22 percent higher than the 1978 level for the same time period. Deliveries to U.S. mills were up almost 37 percent. Silk fiber prices have risen 17 percent since August 1978. China has scheduled a price increase for silk fibers of 6 percent to take effect in January 1980; however, no increased price in Chinese silk fabrics has been announced. U.S. fabric manufacturers, according to trade reports, will have to raise prices. Nevertheless, a growing demand for pure silk and silk-wool blends as part of the trend toward natural fibers is predicted.

Hides and Leather

U.S. production of hides in 1979 will probably be less than in 1978 as 5 million fewer cattle go to market. Hide prices have more than doubled in the last 18 months. The price of leather in 1979 is estimated to be between 32 and 35 percent higher than in 1978. About 56 percent of shoe material is leather; the rest is vinyl and plastic, the cost of which has also risen because of oil price increases.

U.S. shoe production for 1979 is estimated at 390 to 395 million pairs, down from 419 million in 1978. According to industry sources, the wholesale price of shoes has risen 25 percent in 1979; also, the producer price index for footwear was up 22 percent this September over a year ago. However, this has not all been passed on to the consumer and has not been reflected in the Consumer Price Index. Continued price increases in footwear at the retail level can be expected during 1980.

Without a quota on hide exports, the percentage for domestic use has declined from 52 percent in 1972, to 38 percent in 1978, and to 27 percent for the first 7 months of 1979. The United States produces about 15 percent of the world's hides; it supplies 75 percent of the internationally traded hides.

On October 1, 1979, Argentina lifted its embargo on cattle-hide exports in exchange for a phaseout in U.S. leather import tariffs. The embargo will be replaced by a temporary export tax. Both tariff and export tax will be eliminated on October 1, 1981, after intermediate reductions, if both nations agree. This should ease current hide shortages and prices should increase at a slower rate.

DEVELOPMENTS IN THE EXPORTING AND IMPORTING OF FIBERS, FABRICS, AND APPAREL

U.S. exports of manmade fibers were up 64 percent for the first 6 months of 1979 over that period in 1978. U.S. prices are lower than those of other nations because of more efficient production, currency exchange rates, and the artificial control of U.S. oil prices. Exports of fabrics increased in 1979; imports decreased.

A substantial decline in overall U.S. imports of apparel was recorded. For the first 6 months of 1979, manmade fiber apparel imports dropped almost 11 percent, wool apparel 22 percent, and cotton 7 percent from the same period in 1978. This, together with a lower level of domestic production, was probably due to slower retail sales.

After 5 years of multilateral negotiations, the United States and 40 other nations, on April 12, 1979, entered into agreements designed to regulate and promote freer trade. When implemented, the Multinational Trade Agreement removed export subsidies, import restrictions, and permitted tariff reductions. Tariff cuts of 40-60 percent on women's and children's clothing have been widely reported. Eventually this will mean lower retail prices for imported apparel.

Various government agencies are concerned with the effects of imports on our domestic industries and employment levels. When petitioned by a firm, the U.S. Department of Commerce will investigate whether increased

imports have led to decreased sales or to "lay-offs" of workers. If certified as eligible to receive trade adjustment assistance, firms can receive financial or technical assistance or both. Since the program began in 1975, over 250 firms in the footwear, apparel, and textile industries have been certified eligible for assistance. The International Trade Commission hears complaints from U.S. leather apparel firms and their workers that increased imports are detrimental to the domestic industry. The U.S. Department of Labor has certified that some 2,000 workers were "laid off" in 1978 as a result of increased import competition and are eligible to apply for Federal funds under its trade adjustment assistance program. Congress is considering establishing a new special Court of International Trade to review import transactions.

REGULATORY DEVELOPMENTS

Federal law prohibits unfair acts and practices and unfair methods of competition. The Federal Trade Commission has been conducting wide-ranging investigations of price fixing in the men's and women's apparel industries. When violations of the law are exposed, consent order settlements with the manufacturers prohibit them from fixing the retail price at which their product can be sold or advertised.

A new type of label telling consumers more specifically how to care for textile garments and piece goods and how to avoid damaging them will be required under a new Federal Trade Commission ruling. It will amend the 1972 requirement for permanent care labeling of textile wearing apparel and will add draperies and curtains, upholstered furniture and slipcovers, carpets and rugs, household linens, and suede and leather garments. New provisions include:

- Manufacturers recommending washing on a care label must also recommend the method (hand or machine) and the water temperature (unless all temperatures can safely be used).
- Method of drying and, where necessary, the temperature must be given.
- Items that need ironing and cannot be ironed with a hot iron must have care labels stating the recommended temperature.

- Appropriate warnings, such as “no bleach” must be included.
- Manufacturers recommending drycleaning must also recommend the type of solvent (unless all solvents can safely be used).
- If an item can be cleaned by more than one method, the manufacturer need give instructions for only one.

- Manufacturers should have a “reasonable basis” for the recommendations on the care label.
- Care labels for piece goods must be given upon request by the consumer.

The new label will go into effect in spring 1980.

FOOD PRICES IN 1980

By Kenneth R. Farrell¹

Persistent inflation continues to be the major economic concern of the Nation; and, the most visible of the price rises continue to be in the energy, food, and transportation sectors. Retail food prices in 1979 averaged nearly 11 percent higher than in 1978, about the same as the general rate of inflation. Those increases follow a 10-percent rise in food prices and a 7.7-percent inflation in the overall economy in 1978.

Most forecasters expect the general rate of inflation to be around 10 percent for 1980. If this forecast is accurate, increases in food marketing costs alone imply significant increases in food prices in 1979. However, if 1980 farm price increases are moderate, as expected, the total increase in food prices could well be below the overall rate of inflation. Current information and commodity forecasts underscore that possibility.

Food Prices and Inflation

Price movements in the food sector are often discussed separately from the state of the economy and the general inflation rate. However, the general economy determines the environment in which the food sector operates, and general inflation is a contributing factor to increases in food prices. Costs of production at the farm level as well as costs of processing and

distributing farm food commodities both change roughly in line with the general inflation rate. In addition, the strength or weakness of the economy can change supply and demand conditions by affecting production and consumption decisions in the food sector.

The close, positive relationship between inflation in the general economy and inflation in the food sector is evident over the past three decades. In the 1950's, inflation in the general economy and in the food sector both averaged about 2 percent. In the 1960's, both also rose about 2 percent. In the 1970's, although general inflation varied widely, it has averaged 7 percent while food inflation has averaged 8 percent.

The most commonly used and closely watched indicator of overall retail prices is the Consumer Price Index for all urban consumers (CPI-U). Compiled monthly by the Bureau of Labor Statistics, retail prices are surveyed nationwide for a fixed basket of consumer goods and services. Indices representing these prices are reported, and weighted aggregates are computed for major goods and services categories. Changes in the CPI can be used as an indicator of the general inflation rate and, in fact, this is the most commonly used inflation measure.

Currently, the relative importance of food in the CPI-U is 18.2 percent. This means that almost one-fifth of consumer expenditures on goods and services is spent for food. Food is the second most important category of consumer expenditures behind housing (44.3 percent) and slightly ahead of transportation (17.8 percent).

Expenditures for food at home account for 69 percent of all food expenditures, with the

¹ Administrator, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. This article is condensed from a paper presented at the Agricultural Outlook Conference in November 1979, at Washington, D.C. Complete copies are available from Economics, Statistics, and Cooperatives Service, Information Division, Publications Unit, Room 0054, South Building, Washington, D.C. 20250.

remaining 31 percent being accounted for by food expenditures away from home. In food expenditures at home, meat is the most important category (26 percent) followed by fruits and vegetables (14 percent), dairy products (13 percent), and cereals and bakery products (12 percent), and other (4 percent).

1980 Outlook

We expect retail food prices in 1980 to average 7 to 11 percent above 1979. About 6 percent of the expected increase in the retail price of food at home will derive from increases in the farm value of the foods; 74 percent is expected to result from increases in costs of marketing food; and about 20 percent will be traceable to increases in the prices of fish and imported foods. This outlook contrasts with the experience in recent years when higher farm prices had a major role in pushing up consumer food prices.

Farm value of domestically produced food. The highlights of the outlook for principal food commodities follow:

- **Red meats and poultry:** Farm-level livestock and poultry prices are not expected to rise in 1980. Some further increase in cattle prices likely will be offset by lower prices for hogs and broilers. Pork production will be record large in 1980, but broiler output is expected to turn lower by midyear. Beef production may be only marginally higher than 1979.

- **Dairy and eggs:** Milk production in 1980 is expected to exceed 1979 by about 1 percent and prices may rise by 10 percent. Egg production may be slightly higher in early 1980, but large supplies of other protein foods may hold egg prices below 1979 levels.

- **Fruits and vegetables:** The new citrus crop is expected to be record large, up 15 percent from 1979. This will hold citrus prices down in 1980, especially for oranges. The 1979 crop of fresh vegetables will be up 3 to 4 percent. The canned and frozen vegetables supply may be up 6 to 7 percent. In response to larger supplies, prices to growers are expected to remain below the 1979 level.

- **Cereals and bakery products:** Food grain production was large in 1979, but strong export demand will push prices higher. The

wheat crop is up 18 percent and rice production is record large. Wheat and rice prices are expected to average higher in 1980 than 1979.

- **Fats and oils:** 1979's record large soybean crop is up 18 percent from 1978. Demand for exports is also up but not as much as the supply. As a result, soybean prices are expected to average lower in 1980. Peanut production will be up about 3 percent in 1979 and the sunflower crop is twice as large as in 1978.

- **Sugars and sweeteners:** Sugarbeet production in 1979 will likely be down about 13 percent from 1978, but U.S. sugarcane production will be larger. World sugar supplies are tight and increases in world prices are likely to push domestic prices up.

Combining and weighting these diverse commodities suggests that with no serious weather-related problems the farm value of the market basket may average only moderately higher (1 percent) than in 1979.² But, as has been demonstrated in recent years—most recently the last two winters—weather conditions can disrupt production of important farm food commodities and significantly alter the pattern and level of retail food prices. Such potential instability is heightened by the close linkage of our domestic food system with world markets, which themselves are subject to weather-related instability. Allowing for the possibility of serious weather problems in some part of the country during 1980, a prudent forecast would range from no change to a 10-percent increase in the farm value of the market basket in 1980 despite expected large supplies of commodities in the first half of the year.

Our "favorable weather" forecast of a 1-percent increase in farm value, if realized, is in sharp contrast to the double digit percentage increases in 1978 and 1979. If realized, the farm value will be the primary moderating effect for retail food price changes next year. However, as the asymmetry in the forecast range for the farm value change implies, the price implications of these weather-related uncertainties are more likely to push prices

²The farm value is the payment to farmers for the quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at the first point of sale and may include marketing charges, such as grading and packing, for some commodities.

higher rather than lower. Supplies of fruits, vegetables, the summer crops, and even meats could be affected by weather. The actions of pork and poultry producers are of particular importance here.

Marketing costs for domestically produced food. Food processing and marketing costs are the major component of retail food prices, accounting for about 60 percent of the retail product value. This, of course, varies among products. For some, such as cereals and bakery products, these costs account for over 80 percent of the final retail price. For another, namely eggs, it is as low as 35 percent.

The farm-to-retail price spread, calculated from the USDA market basket statistics, is a measure of food processing and marketing costs. These costs, arising from the nonfarm sectors, closely parallel the rate of inflation. In 1980, these costs are expected to rise 9 to 12 percent with the current assessment of 10 percent in line with the expected general rate of inflation.

Labor costs, the largest component of marketing costs (46 percent), are expected to rise almost 10 percent because of higher wages, increased employee benefits, and small productivity gains. The large increase in the CPI in 1979 has intensified pressure for larger wage increases in the future. Unions representing 300,000 food industry employees will negotiate contracts in 1980 and will probably insist on substantial catch-up raises. Additional raises are assured for workers who have semiannual cost-of-living adjustment clauses in their contracts. Also, some workers will benefit from the increase in the minimum wage from the present \$2.90 per hour to \$3.10 that was effective on January 1, 1980.

Employee benefits—including paid vacations and holidays, health insurance, private pensions, and employer payments for social security and unemployment insurance—have generally increased more rapidly than hourly earnings. In contract negotiations, employees have insisted on more and better fringe benefits—which are not subject to income taxes—rather than wage increases. To maintain the purchasing power of pensions for retirees and to maintain existing benefits for workers, the cost to the employer will rise with the general inflation rate.

The cost of packaging materials (12 percent of marketing costs) is expected to increase 9 to 10 percent in 1980, down from last year's 11-percent increase. Plastic packaging materials will cost more in 1980, reflecting higher petroleum prices. The cost of glass containers and paper packaging materials will also increase, but less than the general inflation rate.

Food transportation costs (8 percent of marketing costs) are expected to increase 10 to 11 percent, reflecting higher rail and truck freight rates. General rate hikes and fuel surcharges imposed in response to higher energy costs in 1979 will continue in 1980. Higher energy costs will also affect retail store operators and food manufacturers. The costs of lighting, heating, cooling, and processing foods will rise substantially because of higher prices for electricity and natural gas.

Profit rates in the food industry are expected to decline slightly in 1980, especially if there is a slowdown in economic activity. Food manufacturers' profit rates are likely to decline most, whereas increased competition from discount and volume food stores is expected to have a negative impact on food retailing profits.

A decline in profit rates for food retailers in 1980 would follow 2 years of increasing profits. In 1978, food retailing profits increased more than 30 percent. In 1979, food retailing profits are expected to increase about 13 percent. In both 1978 and 1979, after-tax earnings to sales ratios in food retailing have averaged about 0.9 percent—the highest in recent years.

Fish and imported foods. The fish catch in 1979 was up substantially, stimulated in part by high prices for other meats. The outlook for 1980 is for another large catch. Per capita consumption of fish and seafood has been increasing gradually in recent years, reflecting increased demand. For this reason, with increased supplies in 1980, fish and seafood prices are expected to rise about 9 percent.

Coffee production is not expected to increase substantially, mostly because a freeze in Brazil damaged the 1980 crop. Coffee prices have increased since last summer as a result of the freeze and are expected to continue increasing through 1980. This reverses a downward trend in coffee prices dating back to 1977.

Retail food prices. Expected changes in farm-level commodity prices, along with increases in marketing costs, are the basis of our retail price forecasts for major food groups. In 1980, beef and veal prices are expected to rise 8.2 percent, pork prices should decline 5.6 percent, and poultry prices are expected to fall 0.6 percent at retail. Egg prices are forecast to decline 1.3 percent. These changes are largely a consequence of developments at the farm level.

Dairy product prices are expected to increase 9.2 percent in 1980. In addition, higher marketing costs should result in an 8.9-percent increase in retail prices for cereal and bakery

products, an 8.2-percent increase in prices for processed fruits and vegetables, and a 7.4-percent increase in fats and oils prices. Sugar and sweets prices should increase about 8.0 percent.

The quarterly pattern of food price increases in 1980 is expected to differ from that of 1978 and 1979. Moderate food price increases are expected early in 1980 because of larger supplies of pork and poultry, as well as some slackening in demand as the economy slows. More rapid price increases in the second half of 1980 may occur as the economy recovers and meat output declines.

OUTLOOK FOR HOUSING

By Peter Treadway¹

The current outlook for housing is basically a function of five interrelated variables: (1) Financial market conditions, particularly mortgage market conditions, (2) the prospects for inflation, (3) the general economic outlook, (4) the cost of housing as compared with consumer income, and (5) the expected demographic demand for housing.

Financial Market Conditions

The current financial environment has turned decidedly unfavorable for housing. Although both long- and short-term interest rates have been rising since 1977, the real "squeeze" on housing finance began to be noticeable only in 1979. Through September 1979, housing starts averaged 1.758 million units at annual rates, a strong level but 11.4 percent below 1978.

Financial conditions generally impact housing in two ways—through yield and through availability. Yields on mortgages have been climbing steadily upward. However, I believe that it is an error to place much emphasis on

the absolute level of mortgage yields. In the last year, yields on new mortgages have broken through the 10- and 11-percent barriers without any housing collapse. In fact with house prices rising approximately 13 percent per year and with mortgage interest tax deductible, a 10- or 11-percent mortgage has been a real bargain. With mortgage yields reaching 13 to 14 percent on new commitments, mortgage interest rates are just reaching a level where they involve a real—pretax—cost in terms of the overall rate of inflation. It seems safe to say that, through September 1979 anyway, rising mortgage rates have had a relatively modest impact on housing activity.

The credit availability problem in the past is what has had a large role in bringing housing to a halt. In 1969-70 and 1973-74, savers found money market rates more attractive than those on savings deposits, and they diverted funds out of savings and loans and mutual savings banks, which are mainstays of the primary mortgage market, and placed funds in short-term money instruments such as Treasury Bills. The process was called disintermediation. The result was that for a while housing was credit starved—mortgages in many areas were not available at any yield—and housing stalled. To some extent that has occurred on a lesser scale

¹ Vice president and chief economist, Federal National Mortgage Association.

in 1979. Despite the institution of money market certificates, which allowed thrift institutions to offer a 6-month certificate at rates almost competitive with money market yields, savings flows have been inadequate in 1979, and this factor more than anything else probably explains why housing starts are off 11.4 percent.

Interest rates, including mortgage rates, will likely be falling in the first half of 1980. But don't expect the 9-percent mortgage to return soon. Over the next 18 months we will be fortunate if mortgage rates drop even to 11 percent for a 20-percent-down conventional mortgage. Once the crunch that we're now in eases, mortgage money will be available but at yields that on a historical basis are rather high.

The Prospects for Inflation

Owning a house or a condominium has been a good investment in an inflationary economy because (a) these are real goods that tend to appreciate with inflation, (b) they are easily leveraged, that is, a small amount of capital can be used to fund a large investment (especially effective when interest rates are below the inflation rate as has been typical recently), and (c) mortgage interest rates are tax deductible. The outlook for housing then cannot be divorced from inflation prospects because home buyers now take inflation into account in their home-buying plans.

In my opinion, the outlook is for inflation to continue somewhere in the 8- to 10-percent range where it is at present. I am not optimistic about any significant lowerings over the next few years. The following observations lead to this pessimism:

1. The current inflation rate took 15 years of monetary and fiscal excesses to create and it is not going to be eliminated in 1 or 2 years. Moreover, most sectors of society—wage earners, home buyers, lenders, and even the government—have adjusted to the expectation of more inflation. This fact of adjustment makes any abrupt downward change in inflation all the more unlikely because it will be so painful. The homeowners who borrowed at 12 percent—whether they realize it or not—have a vested interest in having their houses appreciate in value at a 10- to 15-percent rate.

2. The “old time medicine” of a big recession to cure inflation has been discredited politically. The U.S. suffered the worst recession in 1974-76 since the Great Depression, and it ultimately was a failure—the underlying rate of inflation in 1979 was almost double that of 1974.

3. 1980 is an election year and traditionally bad times and rising unemployment are the wrong background for an incumbent seeking reelection. There are limits as to how far or how long the Federal Government can go with its current tightening policy. It should be noted, however, that the recent Federal moves have probably spared the economy further ratcheting up of inflation in the immediate future.

4. There are several supply side factors that will probably push inflation upward regardless of monetary or fiscal policy. Three deserve mention here:

- (a) Energy. Oil prices give every indication of rising faster than the inflation rate over the next few years.

- (b) Farm prices. Rising energy prices, possible water conflicts with energy programs in the West, and rising world populations suggest that real wholesale prices of wheat, corn, and red meat will not decline in the next few years as they did from 1950 to 1970.

- (c) Environmental and safety regulations. Despite the current backlash in some quarters, these regulations are not going to go away and they do add to conventionally measured costs and reduce productivity.

The Outlook for GNP in 1980

I will give only a brief sketch here, but in a nutshell we do not see a Great Depression in 1980. Our view is that real Gross National Product (GNP) growth will be negative, say at -2.5 percent annual rate over this quarter and next and that growth will gradually turn positive from there on. This would result in real growth rates of 1.9 percent and -0.5 percent for 1979 and 1980, respectively. Inflation as measured by the GNP deflator, which is a better index than the Consumer Price Index, should run at 8.9 and 9.2 percent for 1979 and 1980, respectively. Thanks to the 1979-80

recession, the rate of inflation will be down slightly in 1981.

The Cost of Housing in Relation to Income

Since 1970, house prices have consistently outpaced consumer incomes (see table). Until recently, at least, it seemed to some as though this situation could go on indefinitely. Based on our estimate for 1979, this trend has intensified. However, it is my view that the relative rise will increasingly be influencing the type of new housing that is built.

The Demographic Factors That Support a Strong Housing Demand

One factor that will keep housing activity relatively strong over the next few years is the strong underlying demographic support for housing. These factors may be listed as follows:

First, the population of the United States is currently growing by at least 1.6 million per year. This alone adds to the potential need for additional housing.

Second, a large demographic "bump" is making its effect felt on American buying patterns. This bump consists of the children of the postwar "baby boom," who have been reaching household formation and house-buying age. For example, the peak birth year for the United States was 1957, when 4.33 million births were recorded. Annual births began rising sharply at the end of World War II, and from 1954 to 1964 births in the United States each year exceeded 4 million. Substantial declines in the number of births only began in the mid-1960's and, as a point of comparison, total U.S. births were 3.1 million in 1976. As the first "wave" of the baby boom reached adulthood from 1970 to 1977, the 25- to

Family income and housing prices for selected years, 1963-78

Year	Median family income ¹	Median sales price of new homes ²	Ratio of sales price to income (new)
1963	\$6,249	\$18,000	2.9
1964	6,569	18,900	2.9
1965	6,957	20,000	2.9
1966	7,532	21,400	2.8
1967	7,933	22,700	2.9
1968	8,632	24,700	2.9
1969	9,433	25,600	2.7
1970	9,867	23,400	2.4
1971	10,285	25,200	2.5
1972	11,117	27,600	2.5
1973	12,051	32,500	2.7
1974	12,904	35,900	2.8
1975	13,719	39,300	2.9
1976	14,958	44,200	3.0
1977	16,009	48,800	3.0
1978	17,300	55,700	3.2
1979 ³	18,500	⁴ 63,000	3.4

¹Economic Report of the President, 1978, table B-25.

²U.S. Department of Commerce, Bureau of the Census, New one-family houses sold and for sale, Construction Report C-25 for selected years.

³Preliminary figures.

⁴8-month average.

34-year age group experienced a 31.8-percent growth—the highest percentage increase of any age group, as recorded by the Bureau of the Census. The 25- to 34-year age group is one in which dramatic increases in headship rates are normally recorded. The headship rate is derived from the number of households in a given population divided by that population and can be regarded as the propensity to form households. This rapid increase in a segment of the population, which coincidentally also has a high tendency to set up new households, can be expected over at least the next 5 years and probably into the late 1980's. These facts have important implications for housing. For example, a recent study by the U.S. League of Savings Associations estimated that 63 percent of first-time home buyers and 36 percent of all home buyers were under the age of 30. Thus a good part of the baby boom will be household formation and house-buying age during 1979-83.

A third factor affecting housing demand is the increased percentage of women in the labor force. This has permitted the creation of more households in the case of divorced and single women and has also broadened many families' ability to afford new and better housing.

A fourth demographic factor is the continuous rapid growth in the age 65 and over population. Increased prosperity has permitted a greater proportion of this rapidly growing group to maintain separate households. The headship rate of this group is likely to continue to be the highest of all age groups.

Outlook for Housing in 1980

A moderate recession, continuing inflation, lower but still historically high levels of interest rates, rising real energy costs, and strong underlying demographic demand—these are the key ingredients for the 1980 housing picture. In terms of new housing activity, I am a relative

optimist. Housing starts for 1980 could hit 1.6 million units, thanks basically to the demographic demand and a continued view of housing as a good hedge against inflation. Existing home sales may come in at about 3.5 million units. In the first 2 quarters, however, new starts could average only 1.4 million units, with a rise in housing activity in the second half of the year.

The type of house built may show some change from the past. The higher cost of houses (relative to income) as well as higher energy costs may work to halt the trend to more square feet so evident in new house construction in recent years. What we may see is more attached housing, more condominium-type construction. In the 1.6-million-unit forecast, I am assuming that 600,000 will be for multifamily (2 or more) units. About 150,000 to 200,000 units will be subsidized rental units and the majority of the rest will be oriented to condominium ownership rather than rental. Also mobile home shipments may surprise some people and could run in the 300,000-unit area.

One fortunate aspect of the current situation is that unlike 1974 we do not have any major overbuilding at the present time. Housing inventories are modest—the 1979-80 recession has been forecast for 2 years—and vacancy rates are low. These factors mitigate against a housing bust in 1980 on the scale of 1974.

The big question is what happens after the next 2 quarters of less than 1.5-million-start housing activity. In the next 6 months the rate of house price increases should slow down and some markets may show an actual downturn in house prices. But with the demographics as strong as they are, there is a real possibility that house prices may take off again in 6 to 9 months when money becomes available. The moderate curtailment in housing activity over the next 6 months can only eventually aggravate the problem.

USDA/HEW RELEASE JOINT DIETARY GUIDELINES

Nutrition information and education have frequently been hampered by the flood of conflicting statements and advice coming from many sources, some of which are often questionable. As a result, the public is perplexed and confused. To clarify the situation and provide the public with practical and consistent nutrition information, scientists in the U.S. Departments of Agriculture and Health, Education, and Welfare developed a set of dietary guidelines. These scientists worked for more than a year and a half reviewing present knowledge of nutrition and translating recent scientific findings into easily understood statements.

The product of this joint effort is a set of seven dietary recommendations written for the lay public and published in a booklet, "Nutrition and Your Health: Dietary Guidelines for Americans." The value of selecting a variety of

foods to obtain essential nutrients and the importance of maintaining ideal body weight are emphasized. In addition, the booklet presents information as known today about the relationship of specific dietary components (such as fat, saturated fat, cholesterol, sugar, sodium, and alcohol) to specific diseases and physical conditions. Suggestions are given also to help people relate food choices to these health factors.

Copies of the dietary guidelines are available, without charge, from the Office of Governmental and Public Affairs, U.S. Department of Agriculture, Washington, D.C. 20250; from State cooperative extension nutrition specialists at land grant universities; or from public health nutrition directors in State departments of health.

TRENDS IN EDUCATION LEVEL OF WORKERS, 1973-78

The educational level of American workers rose to an average of 12.6 years of school completed in March 1978, with 34 percent of workers 16 years old and over completing at least 1 year of college. This compared with 28 percent in 1973.

The relationship between rising levels of education and rising labor force participation rates became more evident between 1973 and 1978. Labor force participation rates for persons with at least some college education increased from 65.7 to 69.6 percent, whereas the rates for persons with less than a high school education declined from 47.6 to 46.2 percent. Much of the increased labor force participation among persons with some college education can be accounted for by women, whereas the decline in participation among the less educated has occurred among both women and men. A larger percentage of men in the labor

force (19 percent) than women (14 percent) had completed at least 4 years of college in 1978. Among blacks this is reversed, with a greater proportion of women than men having completed high school and obtained a college degree.

Although persons at all levels of education had higher unemployment rates in March 1978 than in March 1973, those with less education showed a larger increase. The unemployment rate of those with less than a high school diploma increased from 8.9 to 12.4 percent, whereas the rate of those with a college degree increased from only 2.1 to 2.5 percent.

Source: Brown, Scott Campbell, 1979, Educational attainment of workers—Some trends from 1973 to 1978, Special Labor Force Report 225, U.S. Department of Labor, Bureau of Labor Statistics.

MULTIPLE JOBHOLDERS

An estimated 1 out of every 20 employed workers, or 4.5 million people in the United States, were multiple jobholders in May 1978.¹ Although the number of persons with second jobs was higher in 1978 than in the mid-1960's and early 1970's, the multiple jobholding rate (the proportion of the employed who held second jobs) has declined somewhat because the number of employed persons rose faster than the number of multiple jobholders. The rate was 4.8 percent in 1978 compared with the prevailing rate of 5 percent during the mid-1960's and early 1970's.

Approximately 56 percent of the multiple jobholders held two wage and salary jobs in such nonfarm industries as manufacturing, trade, and service. About 16 percent held primary jobs in nonfarm industries and a second job in agriculture. Those moonlighting in their own nonfarm business accounted for another 19 percent.

Multiple jobholding rates are highest among workers in middle-age groups (25 to 54 years) and lowest among those in the youngest and oldest groups. More whites (5.0 percent) than blacks (3.1 percent) and Hispanics (3.3 percent) held second jobs, as did more men (5.8 percent) than women (3.3 percent). The num-

ber of women multiple jobholders has greatly increased between 1970 and 1978 because of the sharp rise of women in the labor force and the proportion of women who hold a second job. Women moonlighters are more likely than men to work part time at both their jobs—48 percent and 20 percent, respectively. The number of men moonlighting has declined slightly, although the multiple jobholding rate remained highest for married men (6.5 percent) and lowest for married women (2.9 percent). A decrease in family size contributed to the proportionate decline of married men holding second jobs.

Multiple jobholding varies according to a worker's industry and occupation. Professional and technical workers and farmers and farm managers are most likely to hold second jobs, accounting for 7.4 and 7.5 percent, respectively, of all persons in those occupations. By industry classification, those in the education services, the post office, and State and local governments were most likely to hold second jobs. Men employed on their primary job as teachers below the college level and protective service workers, such as police and firefighters, had the highest moonlighting rate. The lowest moonlighting rate for men was found among operatives (except transport) and nonfarm laborers.

¹The U.S. Department of Labor considers multiple jobholders to be those employed persons who, during the survey week, (1) held jobs as wage or salary workers with two employers or more, (2) were self-employed and also held a wage or salary job, or (3) were unpaid family workers on the primary job and held a secondary wage or salary job.

Source: Rosenfeld, Carl, 1979, Multiple jobholding holds steady in 1978, *Special Labor Force Report 221*, U.S. Department of Labor, Bureau of Labor Statistics.

MULTI-EARNER FAMILIES

Three out of every five husband-wife families reported in March 1979 that at least two family members were earners during the previous year. Since 1970, the number of these multi-earner families has increased by 3 million, mostly as a result of the annual increases in the number and proportion of working wives. In 1979, 85 percent of the multi-earner husband-wife families had both the husband and wife working (up from 81 percent in 1970), 13 per-

cent had the husband and another family member (not wife) working, and 2 percent had two earners other than the husband who was not working. (These percentages may also include husband-wife families with more than two earners.)

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1979, Multi-earner families increase, *News, USDL 79-747*.

BUDGETS FOR A RETIRED COUPLE

The Bureau of Labor Statistics, U.S. Department of Labor, has updated to autumn 1978 its three hypothetical annual budgets for a retired couple and related area indexes that can be used to compare the cost of these budgets in selected urban areas. Changes in prices between autumn 1977 and autumn 1978 are reflected in this updating.

The estimated U.S. average annual cost, excluding personal income taxes, of the lower level budget for an urban retired couple was \$5,514 in the autumn of 1978. The intermediate and higher level budget costs were \$7,846 and \$11,596, respectively. The costs of the budgets are generally lowest in nonmetropolitan areas and in the south-central cities, and highest in Anchorage, Honolulu, and northeastern and western cities.

Between 1977 and 1978, the total cost of the lower, intermediate, and higher budgets rose by 8.5, 8.2, and 7.7 percent, respectively. These figures represent the largest increases since 1974.

Medical care and food constitute the largest increases for all three budget levels, each increasing approximately 13 percent. Housing costs rose approximately 5 percent for each budget level. Transportation cost increases

varied from 6.5 percent at the intermediate budget level, to 6.8 percent at the lower budget level, to 6.9 percent at the higher budget level.

The retired couple is defined as a husband, age 65 or over, and his wife. They are assumed to be self-supporting and living in an urban area. The couple is considered to be in reasonably good health, and they are able to take care of themselves. Qualities and quantities of goods and services provided for each level vary according to differences in consumption patterns, climate, and type of transportation facilities. The costs at autumn 1978 prices of these goods and services represent the updated budget costs. Three hypothetical lists of goods and services were specified in the mid-1960's to portray three relative levels of living—simply termed lower, intermediate, and higher—for a retired couple. The cost of the lower budget is not intended to represent the income necessary for subsistence at the poverty level, but it simply represents a level relatively lower than the intermediate budget.

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1979, Three budgets for a retired couple, autumn 1978; News, USDL 78-588.

WORKING WIVES CONTRIBUTION TO FAMILY INCOME

During 1977, almost 55 percent of the Nation's wives worked at some time during the year, earning an average of \$5,100, or about 25 percent of their families' income. The proportion of family income contributed by the wife varied considerably by her work experience. When she worked year round, full time, she contributed nearly 40 percent compared with 11 percent when she worked half a year or less. In general, the greater the relative contribution of the wife the lower the income of the family.

Black wives generally contributed more to family income than white wives, partly because of lower earnings by black than white husbands. The average contribution of black wives was 33 percent compared with 25 percent for white wives.

Source: Hayghe, Howard, 1979, Working wives' contribution to family income in 1977, Special Labor Force Reports—Summaries, Monthly Labor Review 102 (10): 62-64, U.S. Department of Labor, Bureau of Labor Statistics.

ESTIMATES OF THE COST OF RAISING A CHILD UPDATED

Estimates of the cost of raising a child have been updated to 1979 annual average price levels and will be updated on a regular basis. Total and annual costs from birth to age 18 have been estimated for eight items in the budget: Food at home, food away from home, clothing, housing, medical care, education, transportation, and all other items. Estimates for urban and rural nonfarm children are available at three cost levels, for four regions in the country. Estimates for farm children provide

costs by sex, as well as age, for the Nation as a whole, at four cost levels.

Additional information on the use and interpretation of the estimates is contained in the "Users' Guide to USDA Estimates of the Cost of Raising a Child," Family Economics Review, summer 1979. Users may obtain the article and the updated estimates by writing to the Family Economics Research Group (see page 2 for address).

SOME NEW USDA PUBLICATIONS

(Please give your ZIP code in your return address when you order these.)

The following is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402:

- COMPOSITION OF FOODS: POULTRY PRODUCTS—RAW, PROCESSED, PREPARED. AH 8-5. Revised August 1979. \$7.

Single copies of the following are available free from the U.S. Department of Agriculture. Please address your request to the office indicated:

From Office of Governmental and Public Affairs, Washington, D.C. 20250:

- FAMILY FOOD BUDGETING...FOR GOOD MEALS AND GOOD NUTRITION. G 94. Revised July 1979.
- CONTROLLING HOUSEHOLD PESTS. G 96. Revised July 1979.
- POULTRY IN FAMILY MEALS—A GUIDE FOR CONSUMERS. G 110. Revised July 1979.
- FOOD. G 228.
- YOUR RETIREMENT: A FINANCIAL PLANNING GUIDE. G 230. September 1979.

From Economics, Statistics, and Cooperatives Service, Publications Unit, Room 0054, South Building, Washington, D.C. 20250:

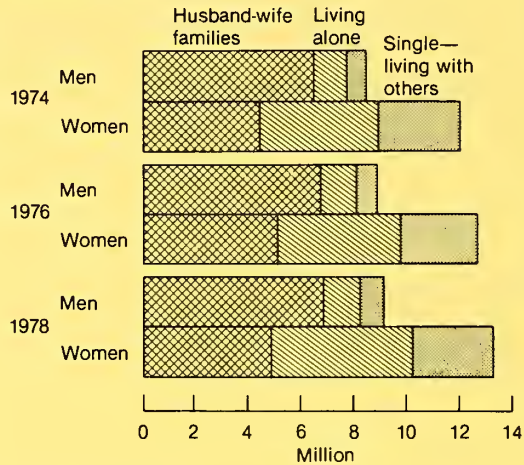
- 1979 HANDBOOK OF AGRICULTURAL CHARTS. AH 561. October 1979.
- FOOD CONSUMPTION, PRICES, AND EXPENDITURES. AER 138. September 1979.
- CONVENIENCE FOODS AND HOME-PREPARED FOODS—COMPARATIVE COSTS, YIELD, AND QUALITY. AER 429. August 1979.
- THE HIRED FARM WORKING FORCE OF 1977. AER 437. October 1979.
- FARMER COOPERATIVE PUBLICATIONS. CIR 4. August 1979.

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SOME NEW USDA CHARTS

Chart 144

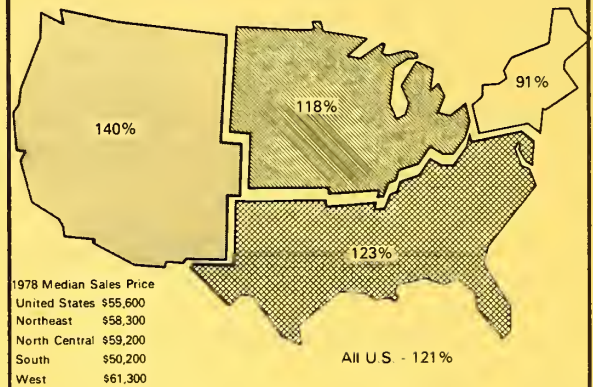
Living Arrangements of Persons 65 Years and Over



Source: Bureau of the Census.

Chart 140

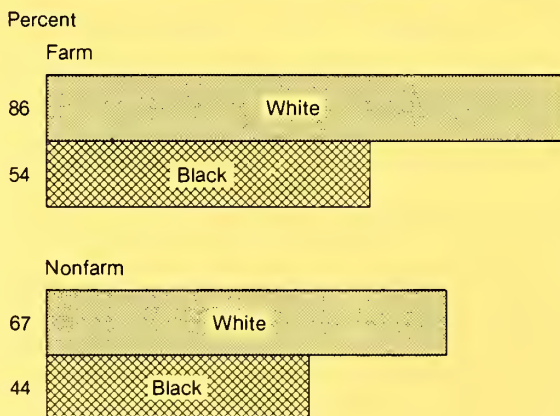
Increase in Sale Prices of Houses, 1971-78



1978 Median Sales Price
 United States \$55,600
 Northeast \$58,300
 North Central \$59,200
 South \$50,200
 West \$61,300

Chart 139

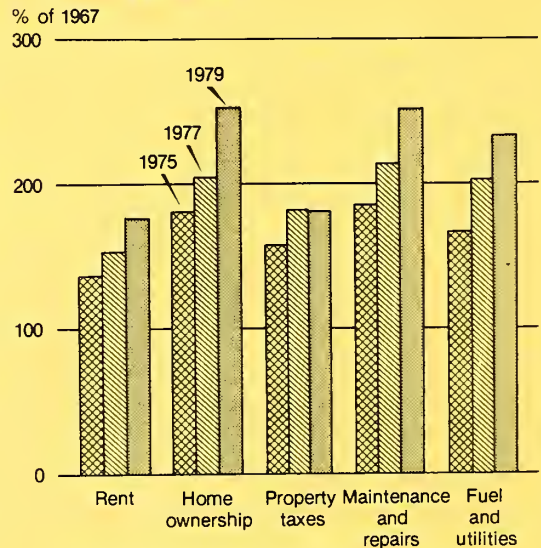
Home Ownership by Residence and Race



1977 data.
 Source: Bureau of Census.

Chart 138

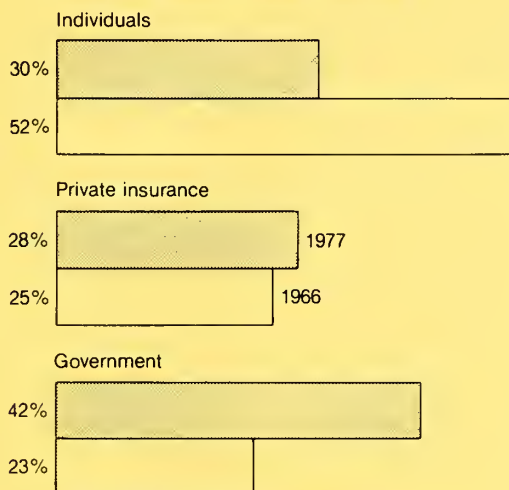
Housing Costs



Annual averages 1975 and 1977; June data for 1979. Home ownership includes home purchase, mortgage interest, taxes, insurance, maintenance, and repairs.
 Source: Bureau of Labor Statistics.

Chart 142

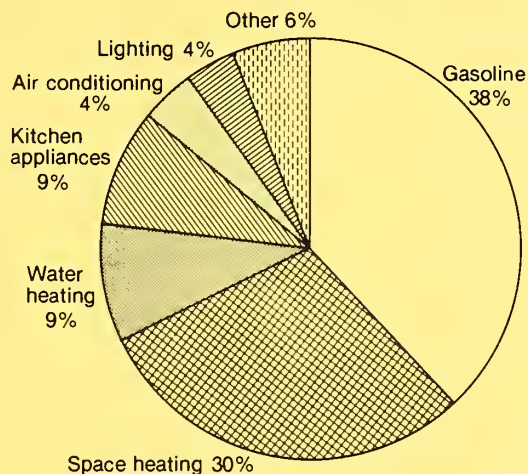
Personal Health Care Spending



Government includes 2% other spending
Source: Social Security Administration

Chart 137

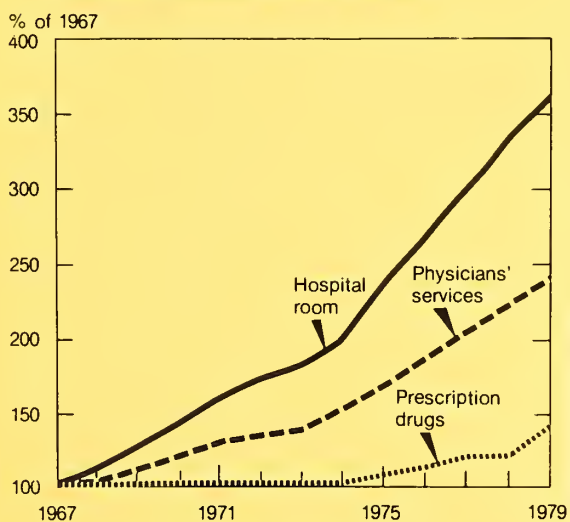
Household Energy Consumption



Gasoline consumption is from personal automobiles and lightweight trucks.
Source: Oak Ridge National Laboratory, 1976 data.

Chart 141

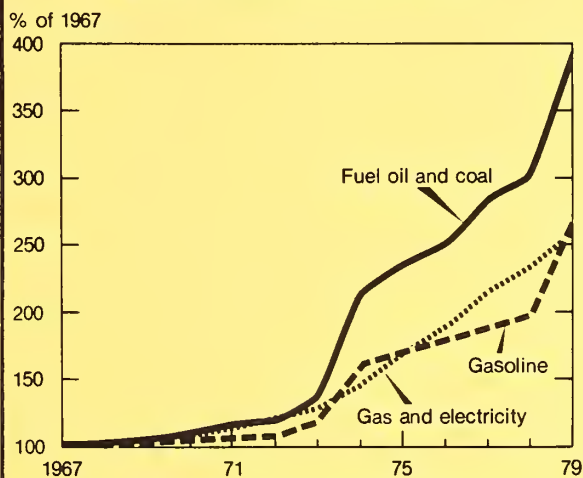
Change in Medical Care Prices



Annual averages 1967-78, June data for 1979. Source: Bureau of Labor Statistics

Chart 135

Change in Consumer Prices—Energy



Annual averages 1967-78, June data for 1979. Fuel oil, coal and gas, and electricity are included in housing index, and gasoline is included in transportation index. Source: Bureau of Labor Statistics.

COST OF FOOD AT HOME

Cost of food at home estimated for food plans at 4 cost levels, December 1979, U.S. average¹

Sex-age groups	Cost for 1 week			Cost for 1 month		
	Thrifty plan ²	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan ²	Low-cost plan
FAMILIES						
Family of 2: ³						
20-54 years	\$29.00	\$38.00	\$47.50	\$56.90	\$125.70	\$164.20
55 years and over	26.10	33.80	41.80	49.80	112.80	146.30
Family of 4:						
Couple, 20-54 years and children--						
1-2 and 3-5 years	41.00	52.90	65.90	78.90	177.30	228.80
6-8 and 9-11 years	49.20	63.70	79.90	95.60	213.30	275.90
INDIVIDUALS ⁴						
Child:						
7 months to 1 year	5.80	7.10	8.70	10.20	25.30	30.80
1-2 years	6.60	8.40	10.30	12.30	28.50	36.30
3-5 years	8.00	10.00	12.40	14.90	34.50	43.20
6-8 years	10.10	13.00	16.30	19.50	43.90	56.30
9-11 years	12.70	16.20	20.40	24.40	55.10	70.30
Male:						
12-14 years	13.60	17.30	21.60	25.90	58.80	74.80
15-19 years	14.90	19.10	24.00	28.80	64.80	83.00
20-54 years	14.50	19.00	24.00	28.80	62.90	82.30
55 years and over	12.90	16.80	20.80	25.00	55.90	72.60
Female:						
12-19 years	12.10	15.50	19.20	22.90	52.60	67.10
20-54 years	11.90	15.50	19.20	22.90	51.40	67.00
55 years and over	10.80	13.90	17.20	20.30	46.60	60.40
Pregnant	14.90	19.10	23.50	27.90	64.80	82.80
Nursing	15.90	20.30	25.20	29.90	68.70	87.80

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1976 (thrifty plan) and Winter 1975 (low-cost, moderate-cost, and liberal plans) issues of Family Economics Review. The costs of the food plans were first estimated using prices paid in 1965-66 by households from USDA's Household Food Consumption Survey with food costs at 4 selected levels. USDA updates these survey prices to estimate the current costs for the food plans using information from the Bureau of Labor Statistics: "Estimated Retail Food Prices by Cities" from 1965-66 to 1977 and "CPI Detailed Report," tables 3 and 9, after 1977.

²Coupon allotment in the Food Stamp Program based on this food plan.

³10 percent added for family size adjustment. See footnote 4.

⁴The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

CONSUMER PRICES

Consumer Price Index for all urban consumers

(1967 = 100)

Group	Dec. 1979	Nov. 1979	Oct. 1979	Dec. 1978
All items	229.9	227.5	225.4	202.9
Food	241.7	239.1	238.2	219.4
Food at home	238.7	236.0	235.4	217.9
Food away from home	253.4	251.3	249.6	227.4
Housing	243.6	240.8	237.7	211.5
Shelter	259.4	255.9	251.5	221.0
Rent	182.9	182.1	181.4	169.5
Homeownership	286.9	282.4	276.7	239.5
Fuel and other utilities .	255.1	252.0	252.9	219.9
Fuel oil, coal, and bottled gas	488.0	477.4	470.8	311.8
Gas (piped) and electricity	270.8	267.3	272.5	236.2
Household furnishings and operation	195.8	195.1	193.3	184.0
Apparel and upkeep	172.2	171.7	171.0	163.2
Men's and boys' apparel ..	165.4	165.4	164.2	160.2
Women's and girls' apparel	154.6	155.1	155.5	151.7
Footwear	184.3	183.8	182.6	169.6
Transportation	227.7	224.9	222.7	192.6
Private	227.5	225.0	223.1	192.5
Public	223.0	216.5	209.1	189.1
Medical care	250.7	248.0	245.9	227.8
Entertainment	193.4	192.8	192.0	180.9
Other goods and services ...	204.0	202.9	202.3	189.1
Personal care	203.0	200.9	199.8	187.3

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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